

# Rock Products

DEVOTED TO THE PRODUCTION  
AND SALE OF ROCK AND CLAY PRODUCTS.

Vol. III.

LOUISVILLE, KY., MAY, 1904.

No. 2.





PRATT'S IMPROVED ROCK DRILL.

*D. W. Pratt*

## Machinery Company.

No. 614 North Third Street,

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THE VALVE, which is the most important part of a rock drill, is of the Corliss or Rotary design and retains a perfectly steam or air-tight seat under all conditions.

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It has a variable stroke and can be used at a stroke where others fail; this being one of the essential qualifications of a good drill, especially in starting a hole or working through seams. It strikes a very hard blow and its recovery is instantaneous. It has no peer as a mudder.

Our drills are made of the very best material the market affords, by skilled workmen, and with new and improved machinery, and particular care has been taken to make them the best on the market. All parts are interchangeable.

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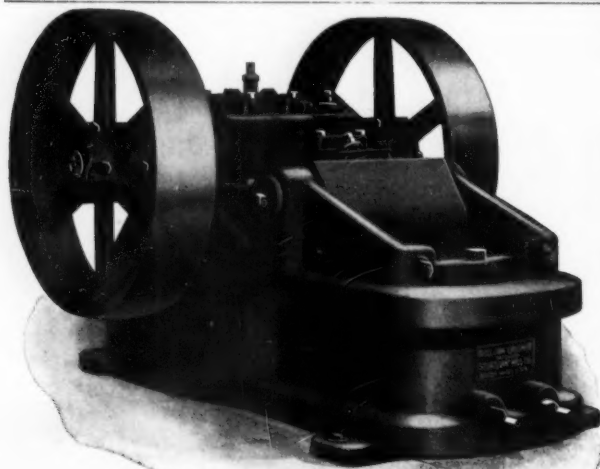
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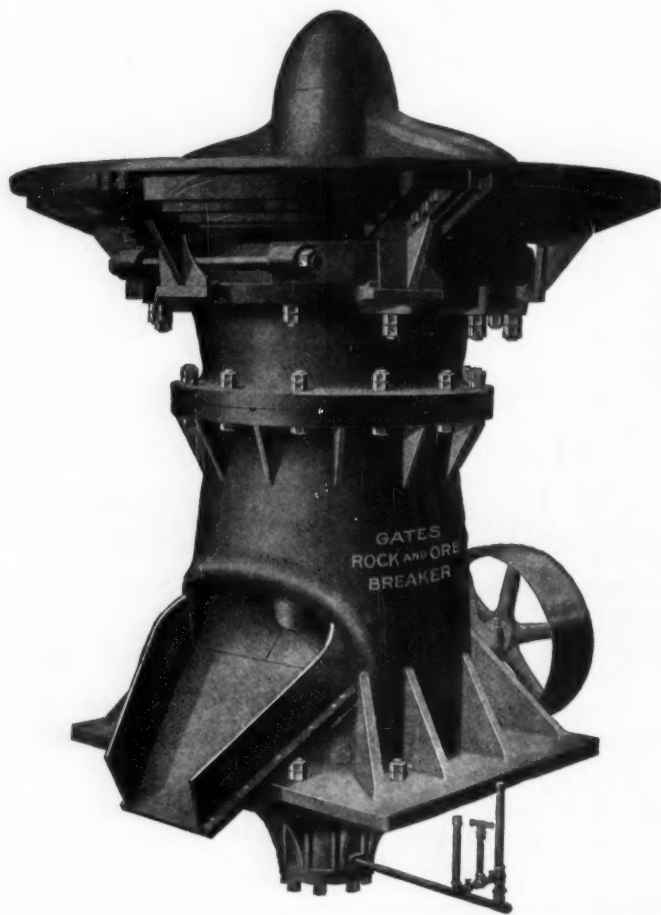
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Two years of critical use by one of the largest firms in the City of New York, have proven the product so thoroughly satisfactory that said firm has arranged to take all the output of two plants using the O'Connell & Feely Process.

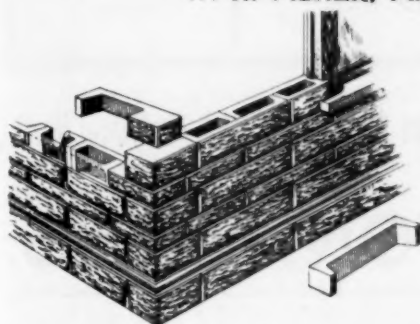
The process can be seen in operation at the plant of the James O'Connell Lime Co., at White Plains, N. Y., 22 miles from the New York City Post Office. Also at the plant of O'Connell & Hillery Company, Tuckahoe, N. Y.

Now is the time for considering the installation of a plant to hydrate your lime and I earnestly solicit your correspondence thereon. A Sample of HYDRATED LIME made by the O'Connell and Feely Process will be gladly mailed to parties wishing same, on receipt of application therefor.

FOR SALE—The PATENT RIGHTS for Canada and England of the O'Connell & Feely Chemical Process for Hydrating Lime. This is a business opportunity without parallel. Address,

**JAMES O'CONNELL,**  
651 W. 131st. Street, New York, N. Y.

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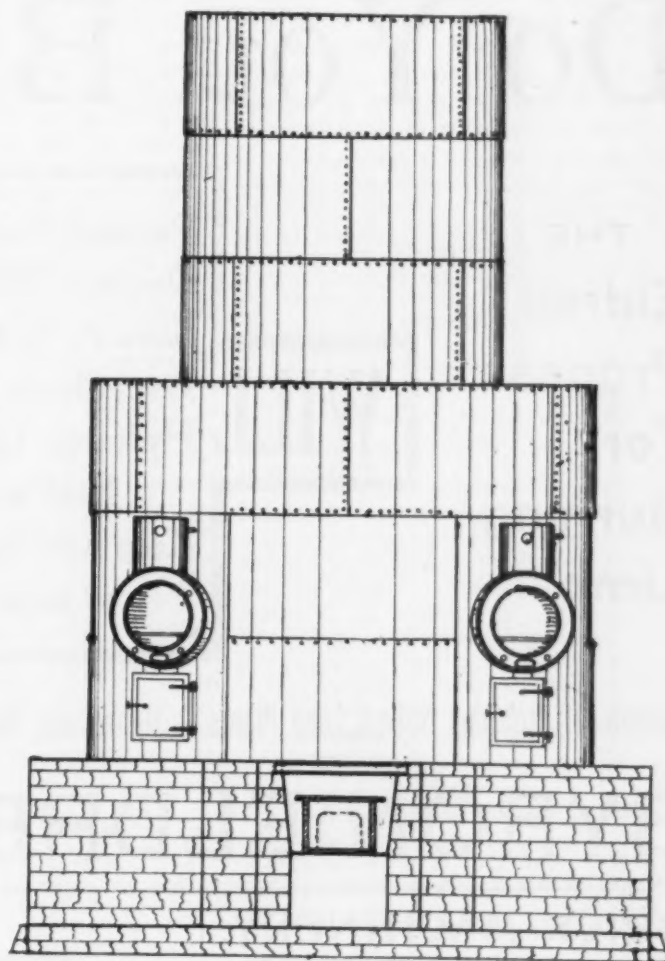
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## James O'Connell's Patented Boiler Arch and Continuous LIME KILN.

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OUTSIDE VIEW OF BOILER.

Turns out more lime, with same heat, than any other kiln. Draft is always regular and under control, regardless of weather. Same heat that burns lime-rock makes steam to operate conveyor carrying stone to top of kiln, about 50 feet high, and also serves to pump out quarries if situated within reasonable distance, AND ALSO MAKES THE STEAM TO RUN THE BLOWERS WHICH PRODUCE THE COMBUSTION TO BURN THE OIL OR SOFT COAL. Boilers always carry full dry head of steam, and arches do not burn out where boilers are placed in. This patent will save you at least 20 to 30 per cent. on burning lime. Only kiln in market to-day turning out perfect product at reduced cost, doing its own work and running as nearly automatic as possible. This kiln burns either lime or cement rock.

THESE BOILERS CAN BE FITTED IN THE ARCH OF ANY KILN'S  
ALREADY ERECTED.

**JAMES O'CONNELL,**

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Which we guarantee will permanently remove iron, sap, and oil stains from granite without injury to the stone.

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No Artificial Stone Plant is complete unless they manufacture the Parry Patent Burial Vault. Perfectly air-tight and water proof. Secure your county on royalty. A money maker. Address

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Tell 'em you saw it in ROCK PRODUCTS.





Entered as second-class matter March 4, 1904, at the Post Office at Louisville, Ky., under the Act of Congress of March 1879.

THE FRANCIS PUBLISHING CO.,  
Publishers.

E. H. DEFEBAGH,.....President and Manager.  
FRED W. RUGG,.....Secretary.

A monthly trade journal devoted to the interests of the manufacturers and dealers in rock products and kindred lines, including Lime, Cement, Salt, Sand, Slate, Granite, Marble, Sandstone, Grindstones, Artificial Stone, Emery Stone, Quarries, Monuments, Manganese, Asphalt, Phosphates, Plaster, Terra Cotta, Roofing and Roofing Tile, Coal, Oil, Mineral Wool, Brick, etc.

The mission of ROCK PRODUCTS is to serve the trade in any and every honorable way possible, to promote better profits and make life more pleasant for those engaged in the business to which it caters. With this end in view, criticism is courted, and all are invited to use its columns to further ideas and suggestions for the good of the trade. The office, too, is at the service of the constituents of this paper; so when you want to buy or sell, or merely ask a question, write, and when you are in town, call and make it your headquarters.

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431 W. Main Street, Louisville, Kentucky

BRANCH OFFICE, NEW YORK CITY:

Room 502, 136 Liberty Street,

ALEXANDER CRISTADORO, Manager.

LOUISVILLE, KY., MAY, 1904.

### Agricultural Lime Needs Encouragement.

In times past the question, "What should be an equitable rate for Agricultural Lime," has come before the freight departments of railroads and unless they have changed the question it don't change the classification nor the rate. The result is that they are out freight, the farmer has not the privilege of using lime for a fertilizer and the lime man is kept from increasing his business.

We have a notable exception to this rule in one of the up-to-date men with the Pennsylvania Railroad, who took it upon himself to look up the question and find out the needs of the agricultural element, what it would do for his road and how he could get not only more business out of the lime people, but make it possible for the farmer to produce greater crops on account of liming and thus the railroad would get an increased tonnage both coming and going.

There are a good many people in the lime business who are looking up the question of agricultural lime and endeavoring to increase their sales. They cannot do much on the subject, however, unless they have the co-operation of the railroads.

It really stands the railroads in stead to help the lime manufacturers on their lines to advertise among the farmers their product and also make a reasonable rate on this class of fertilizer that will permit a greater sale.

### That Floor Question Discussed.

Our correspondent who had the trouble with his Portland cement top dressing separating or refusing to bond with a natural cement base, by the publicity we have given to the question, has brought out some very conflicting information upon the point. The experience of Mr. Howard E. Reid, of Siegfried, Pa., which was published in

the last issue of ROCK PRODUCTS has found several supporters, while others with equal experience along the same line agree with the first correspondent in his opinion that the natural cement base can not be made to bond with the Portland cement top dressing.

For instance, Messrs. Sheddan & Buchanan, of Ashland, Ohio, say, "We have had ten years experience in the business and have never yet been able to accomplish the bond in question. We have found that we could always do better work where we used the Portland cement alone, and the same brand of it at that."

This is a direct contradiction to Mr. Reid when he says, "I have yet to find a single instance where work properly done failed because the different cements refused to unite properly."

Mr. Henry S. Gray, of the Louisville Cement Co., Louisville, Ky., gives some useful information right upon this point, when he says: "Louisville or natural cement bonds slowly, and the bond improves and hardens with age during a period of many months and probably years. Portland cement bonds very quickly, probably attaining its maximum hardness within six months. If the two cements are mixed into one mass then the whole will bond together," and upon this point Mr. Gray agrees with Mr. Reid.

Taking all the information into consideration, it seems that a cement floor of a natural cement base and a Portland cement top dressing, both in proper proportions, has often been laid with satisfactory results, but the natural cement base should not be given time to bond before the Portland cement dressing is applied, and then the base should be left with rough places or ridges and the top dressing should be thick enough to allow the Portland cement to assert its separate character, which should be a thickness of 1 to 1½ inch. Just what the proportions of other materials entering into the composition besides the cements is necessary to produce this result is a matter of wide disagreement. Some practical men who have repeatedly attempted the operation declare that they have used every reasonable proportion and a failure resulting with each experiment, while others have used them in "various ways and proportions with the best possible results."

In view of all the foregoing, since the factor of skill is practically the same in all the cases, the difficulty to be overcome seems to resolve itself into the qualities of the materials that enter into the work.

Don't forget the desirability of selling through the dealer.

The artificial stone burial vault is another likely substitute.

An increase in the demand for Portland cement would be welcome.

The Wooden Indian is a thing of the past. The cement sign is the latest.

Eighty thousand barrels of Louisville cement are used for lining safes!

Fire proofing tests will produce some good information on how to do it, hereafter.

The granite sections of the Northern States are just getting their heads from under the snow.

With winter gone and summer here, look out for increased business along the building line.

GENTLEMEN, get together, increase and divide the profits. The monumental trade needs this.

The World's Fair at St. Louis has been taking in money for five days and of the most attractive exhibits will be found Granite, Stone, Concrete and Clay.

The monument man has his sleeves rolled up endeavoring to get his decks cleared for Memorial Day.

The plaster man has a whole-hearted desire to see a change of classification, which will mean a favorable rate on plaster.

BECAUSE some new venture in artificial stone has not succeeded, there is no reason why it has not come to stay.

FROZEN stone always costs the quarryman money. We can't understand why he doesn't try to avoid having it.

ROCK PRODUCTS has proven an educator: It is a common occurrence to be advised of that fact. It is our hope to increase its value.

INTELLIGENT stone cutting is the way to success, but you must know how to get a fair price, as well as to work the job when you get it.

With the marble quarries developed in this great country of ours, the imports of foreign marbles will gradually decrease like that of cement.

If the traffic men of the railroads don't wake up and quit tightening up the classification and rates, they will kill the goose that laid the golden egg.

The application of conveyors and reduction of cost of handling stone in a crusher is as important as to know how to run the crusher when you get it.

GETTING rid of the waste around the cutting shop of a quarry is one of the problems of the business. The crusher and pulverizer are the instruments.

The new universal bill of lading talked up to them by the railroads will add a few feet more to the red tape, and the shipper has to tumble over to get anywhere.

THERE are only two ways to successfully operate a quarry where expensive stripping is necessary. One is to get your prices high enough to make the customer pay for it. The other is to abandon the hole.

The circular saw is the latest appliance for sawing soft stone. Of course, with a diamond inserted tooth. Next it will be a band saw to save stone and then the band resaw to replace the circular and gang.

A SCULPTOR in scoring the granite man in a recent communication, accuses him of too much commercialism, which, in a measure, is true, but the granite man might say that the sculptor has too little of it.

EVEN the conservative journey cut stone men don't believe that all the stone should be cut in the city shops, but advocate the elimination of this part of their Union Constitution, prohibiting the working of stone at the quarry.

THE Editor of *Stone Cutter's Journal* has come to life and his common sense expressed in the following is refreshing:

"Branches where the employers are organized, and those that have not already done so, should immediately appoint committees to meet like committees from the bosses' associations and draw up working agreements for the coming season, which promises to be a good one, and we should not do anything that would in any manner cause work to be held back. Where no organization exists you should meet the employers in the same spirit—one of fairness, justice and equity, that we can as a whole enjoy the fruits of the prosperous times now with us. Strife, discord or confusion never did nor never will promote or protect the welfare of either."

# THE SUDDEN FLIGHT OF PEGASUS

A TRAVESTY WRITTEN FOR ROCK PRODUCTS.

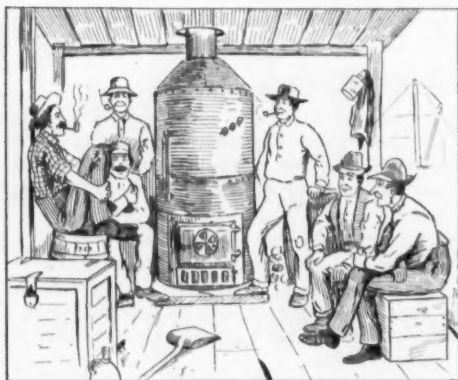


HAT, never heard of Peg? Why, Peg's name ought to go down in history alongside those of our great generals. Yessir, most everybody around here knows about Peg." Rain had driven us from our work in the quarry, and we had retired to the shed of the hoisting engine for shelter. We had seated ourselves upon empty powder kegs, coils of rope, tackle-blocks and various other articles which go to make up the furnishings of a stone quarry. We had lighted our pipes and settled back as comfortably as our temporary upholstery would permit—content to wait until the rain should cease, when Joe ventured the foregoing conversation about Peg.

Joe was a capital story teller. He could hold the undivided attention of a crowd for hours at a time, hence we were eager for Joe to tell us all about the wonderful Peg.

Joe cocked his hat on the back of his head, drew in his long gaunt legs and deposited the heels of his number elevens over the rim of the powder keg. He clasped his big bony hands over his shins, took a couple of long pulls at his Missouri meerschaum, blew out the smoke in great clouds, expectorated with deliberation and proceeded.

"Wall!" he drawled, "To begin with, Peg was a mule. Not an ordinary mule, for he had more sense than all the rest of the mules in Kentucky



JOE WAS A CAPITAL STORY TELLER.

put together. Fact is, he had more sense than half the numbskulls that worked here in the quarry.

## Appearances Against Him.

"When Peg was born he was that tarn-sarned hombley that the kunnel wanted to kill him. All you could see to that mule was laigs an' head, an' all you could see to them laigs wes jint's an' the head'n ears. But we prevailed upon the kunnel to give the colt a chance, an' so come along about three weeks later, that mule was smarter 'n a whip. He'd go scamperin' around the pasture like a streak o' lightnin'; an' so one day the kunnel was out a watchin' him go a sallin' around the field with his long ears a floppin', an' he sez, sez he, 'There goes Pegasus sure enough.' So we named that mule right then an' thar, Pegasus.

"When Pegasus was four comin five, we fetched him up here an' put him on the long sweep that used to hist the stone up out o' the quarry afore we got this here new fangled histin' engine. Pegasus was too long a name to pronounce, and besides it sounded too highfalukin an' so we just dubbed him Peg fer short.

## Quite Gun Shy.

"Well sir, fellers, that mule was so gun shy that when we tetcht off the blast the first time, he riz right up on his hind feet an' give a jump and took that sweep and capstan clean out o' the ground an'

drug it clear to town—more 'n four miles. It took four men an' a boy to git that mule back to the quarry, an' it was more 'n a year afore he got over bein' gun shy.

"He settled down after while an' was the most faithful worker of the hull push of us in the quarry, though he never got over being a little skittish whenever a blast was tetcht off. He was just as stiddy an' faithful as clockwork, an' every one of us got to love that mule—he was so much like the rest of us. We used to divide our dinner with him, an' after the meal was over he wanted his chew of terbacker same's the rest of us did, an' he'd stick out his nose a beggin' fer it.

## Peculiarity of His Voice.

"Ole Peg was so intelligent he could do most everything, even to talkin'. He never did his talkin' durin' the day, he always paid attention to stone histin', but after the day's work was over an' he was put back in the stable then he would holler out, 'Aw Hee!! Aw Hee!!,' an' the sound would go across the valley an' echo back from the opposite hill, 'Aw Hee!! Aw Hee!!.' It was a sort o' laugh-like, just as though he was tickled that his day's work was done. There was something sort o' bloodcurdlin' about that ole mule's bray. If you heard it once you could tell it again if you heard it away up in Ohigher er Egypt.

## Retired from Active Business.

"Yessir; ole Peg served faithfully at stone histin' fer twenty-two straight years, but age began to tell on him 'long towards the last. By'm by we got this here new fangled histin' engine an' retired ole Peg to the pasture without work fer the rest of his days to reward him fer bein' faithful.

"Sunday afternoons we used to go up to the pasture to see how ole Peg was comin' on. He was always glad to see us, an' always asked us fer a chaw o' terbacker. Yessir; he liked his terbacker same's the rest of us did."

"Wall; come along about four years after retirin' him, he begun to run down fast. His teeth got poor so's he couldn't hardly eat, an' he begun to git blind an' so feeble he couldn't hardly git up. We come to the concloushon that it would be an act of humble kindness if we'd end his troubles fer him, so we appinted a committee of five to go up an' shoot Peg.

## Perplexity of the Committee.

"We took a rifle an' went up to the pasture one Sunday mornin'. Ole Peg come a hobblin' out to meet us. He looked at us out of his kind ole eyes an' asked each of us in turn fer a chaw o' terbacker. Then he rubbed his nose agin our cheeks sort o' affectionate like, an' boys, there warrent a dry eye in the committee. There warrent a one in the five of us that had the heart to shoot poor ole Peg, so what was we to do. We were between two fires. We either had to let Peg continue to suffer or else end his troubles fer him.

## The Mystery Solved.

"At last Lem' Mulford solved the perplexin' question. He sez, sez he, 'boys; let's jest tie a stick o' dennemite around his neck an' light the fuse an' then we can git around the foot o' the hill afore it goes off an' we wont have to stand' an' see this cruel thing done.'



LET THEM RUN WHAT HAS TO.

"So Lem, he goes an' brings up a stick o' dennemite an' a length o' fuse. We tied the dennemite around Peg's neck, lit the fuse, then the hull five of us started to run around the foot o' the hill.

"Wall, Peg, the affectionate ole rascal, as soon as we started to run, he tuck after us. The faster we ran the more his ole stiff jint's seemed to limber up, so't he begin to gain on us. We made a bee line fer the fence an' we could hear ole Peg's feet a thumpin' along over the stone an' hear the fuse sizzlin' away.

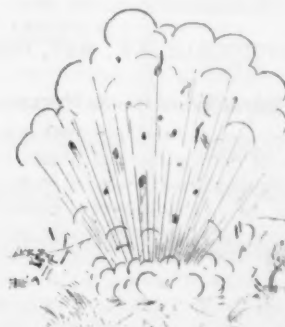
## A Beautiful Race—Peg's Last.

"It was the prettiest race I ever saw. The five of us was jest about neck an' neck, an' ole Peg close behind. A rabbit what got skeered out of a clump of bushes was a runnin' along ahead of us when Lem yells out: 'Git out the way, you cotton tall an' let them run what has to.'

"On an' on we kep' a goin' farely flyin' over the ground, an' ole Peg's nose almost touchin' my back. Every man was a tryin' to reach the goal first, because there was a pretty big inducement offered to win. By'm by, we reached the fence an' got over on 'tother side somehow. Ole Peg come up to the fence an' stopped, but we didn't. No sir-ee. We kept on a whizzin' over the ground, an' a pantin' like lizzards.

## To the Mule Heaven.

"We hadn't got very far on 'tother side o' the fence afore there was a tremendous explosion. The ground seemed to rock under our feet, a big gust of wind struck us in the back an' we went flat on our faces. We were sort o' stunned-like for some time, an' when we come to we hardly dare look around, but when we did we saw that three lengths of fence had evaporated. There was a big hole in the ground an' Pegasus, well he must have flew away, fer we couldn't find hide nor hair of him."



After finishing his story, Joe arose, stretch d his legs, pulled his hat down over his eyes, knocked the ashes out of his pipe and said: "Wall; boys, the rain has stopped, guess we'd better go back to work."

The firm of Briesen, Miller & Co., Baltimore, Md., has been dissolved according to reports from that place.

The strike at the Bridges quarry, at Wabash, Ind., has come to a close. Mr. Bridges has a number of contracts in many cities now under way. He will employ between 600 and 700 hands in his quarry this season.

By the premature explosion of a blast at the Southern Quarry Co. at Fabers, twenty-three miles south of Charlottesville, Va., four men were blown into atoms, including F. F. Jones, of Alexandria, superintendent of the quarry.

The Maryland Casualty Co. has brought suit for \$3,000.00 against the Mine Hill Quarry Co., of Roxbury, Conn. The Casualty Co. insure the employes against accident in the quarry. They allege that more men are employed than represented in the policy or for whom premiums are received.

The LeGrand Quarry Co., Marshalltown, Iowa, is clearing the ground at its quarries preparatory to the erection of a new stone crushing plant that was destroyed by fire last fall. They hope to have the plant ready for operation within sixty days. The capacity will be largely increased.



# ST. LOUIS=The World's Fair City.

St. Louis, Mo., April 30.—The greatest of all great World's Fairs throws open its gates to-day and I must hasten to get this letter written in order that I may be there to see. That it will be complete is not to be expected. There never was a great exposition yet, from the mother of international expositions at Hyde Park, London, in 1851, down to the Paris exposition of 1900 that was ready on the opening day. At the Paris exposition in 1867, when the Emperor Napoleon III was at the height of his power and desired to make the show a great success, with all the resources of the empire at his command, he was unable to have things ready for fully two months after the opening day. Even in the latter part of May I splashed along some roads around the great oval building on the Champ de Mars, that were quite as muddy as those out at our grounds here the beginning of this week. At Philadelphia in 1876 I stood upon the big semi-circular platform, that had been erected outside St. George's Hall, when President Grant proclaimed the Centennial Exposition open, and I can testify that the show was very far from complete at that time. We who lived in Chicago during the whole of 1903 know that although our hustling sister city took a year's extra time, just as St. Louis has done, yet her exposition was very far from ready when the gates were thrown open to the public. Most of the delay is, in every case, due to the exhibitors themselves. At the Columbian World's Fair at Chicago some carloads of exhibits are said to have arrived so nearly at the close of the fair that they were not even unloaded, but sent back as they came.

## Inefficiency of Terminal Association.

The severe winter and the excessively wet spring have been a serious handicap to St. Louis, but her worst trouble is probably due to that cancer upon her industry, the Terminal Association. It was estimated that there would be 30,000 carloads of exhibits to place in the exposition. At the present time it is computed that there are still

8000 carloads to come, and the Terminal Association is only able to handle about 150 cars a day.

The various palaces, such as those of Mines and Metallurgy, Manufactures, Agriculture, etc., have been ready for the installation of exhibits for a long time past, although the reports from time to time, with quite unnecessary accuracy, describe them as 98, or 99, or 99 and a fraction, finished, which means that another coat of paint was to be put on the outside, or some plaster ornaments, withheld till the last moment, were to be added.

Whatever the percentage of exhibits ready to-day may be, there will certainly be enough for visitors to go on with, and those enterprising manufacturers and other exhibitors who are on time will reap the benefit of their forehandedness.

## Palace of Mines and Metallurgy.

Coal is king, especially in such States as Pennsylvania, Wyoming, Indiana and West Virginia. Pennsylvania has an archway at the main entrance of her exhibit over 20 feet in height, composed entirely of coal. Indiana has a circular tower of medieval design, 33 feet high, of similar material. West Virginia is building a column of coal, 100 feet high among the outside mining exhibits. Stones, marbles, limes, clays and cements, in short, everything that comes within the province of Rock Products are to be found here. The marvelous development of the great West in the departments of precious metal mining, together with lead, zinc, etc., will compel attention and wonder. California, in addition to a monumental stone arch, furnishes rich examples of gold, quartz and nuggets. South Dakota has a complete, full sized, operating gold mill, with concentrators, cyanide tanks and other allied appliances. Colorado has a most interesting feature in the shape of a working assay office, with all the modern appliances for the analysis and assaying of ores. The operations will be conducted by students who have earned the honor by their excellent work.

On the exterior space known as the "Gulch"—the outdoor mining exhibit—a reproduction of a turquoise mine, lined with turquoise in its nat-

ural matrix, is being prepared and will soon be finished, but the most notable construction on the "Gulch" will be the cement pavilion, erected as the combined exhibit of the Association of Portland Cement Manufacturers. This association includes about 98 per cent. of the cement manufacturers of the country. The offices of the association here are in the Fullerton Building and Mr. Strong is in charge of the construction. The cement pavilion will not be finished before the middle or the end of June. Exhibits at the rear of this pavilion will be in continuous operation, showing the making of cement blocks, besides various applications of Portland and other cements.

Returning to the Mines and Metallurgy building—I beg pardon—Palace of Mines and Metallurgy—we find that the Pennsylvania State exhibit, in charge of Mr. Louis E. Reber, shows about eighty varieties of building stone and a still larger number of clays. In these latter are included about thirty samples of fire clays. A slate pavilion about twenty feet high, will have worked into its structure a great variety of uses of slate, and will, of course, show a number of the different kinds of slate, which are found in such great quantity in the State of Pennsylvania. Glass sands are also exhibited and not only are the different kinds of sand shown, but the glasses and other products made from them.

## Clay, Brick and Terra Cotta.

In the 20,000 square feet allotted to the collective clay exhibits the most striking feature on account of its height, if for no other reason, is the Hydraulic Press Brick Co.'s structure. Near it is the very handsome glazed terra cotta pavilion by the Northwestern Terra Cotta Co., of Chicago. The Winkle Terra Cotta Co., at St. Louis, has also a very artistic exhibit, besides its principal exhibit in the Palace of Manufactures, consisting of a terra cotta pavilion and balustrade. Another of the completed exhibits is that of the Cambridge Tile Manufacturing Co., Covington, Ky. This was finished on Thursday, the 28th. It is one of the wall exhibits and has a frontage of 30 feet. The principal feat-



Exhibit of the Leclercq Fire Brick Mfg. Co. (Gas making plant.)  
In Palace of Manufactures,  
St. Louis, Mo.

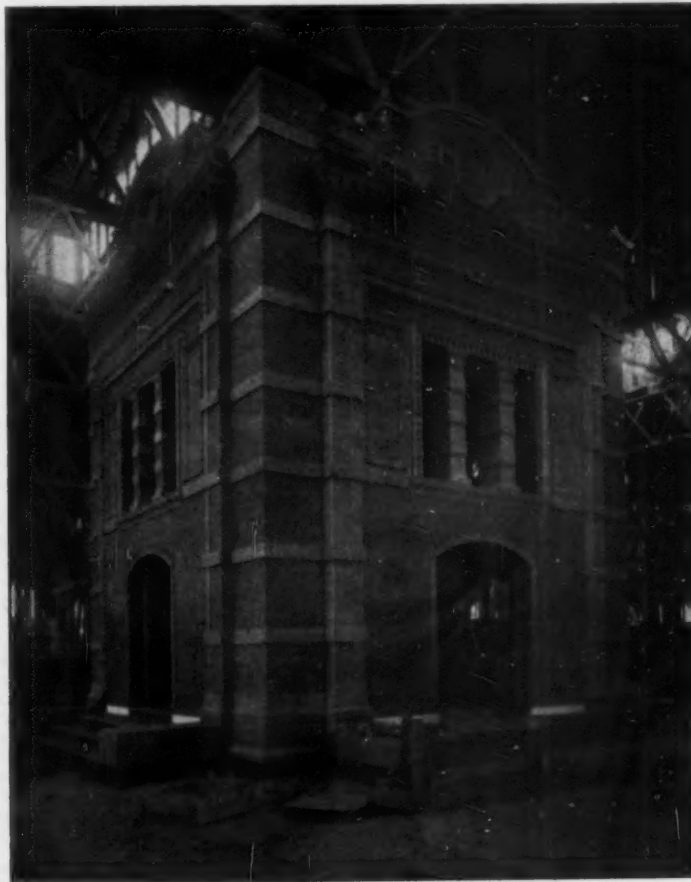
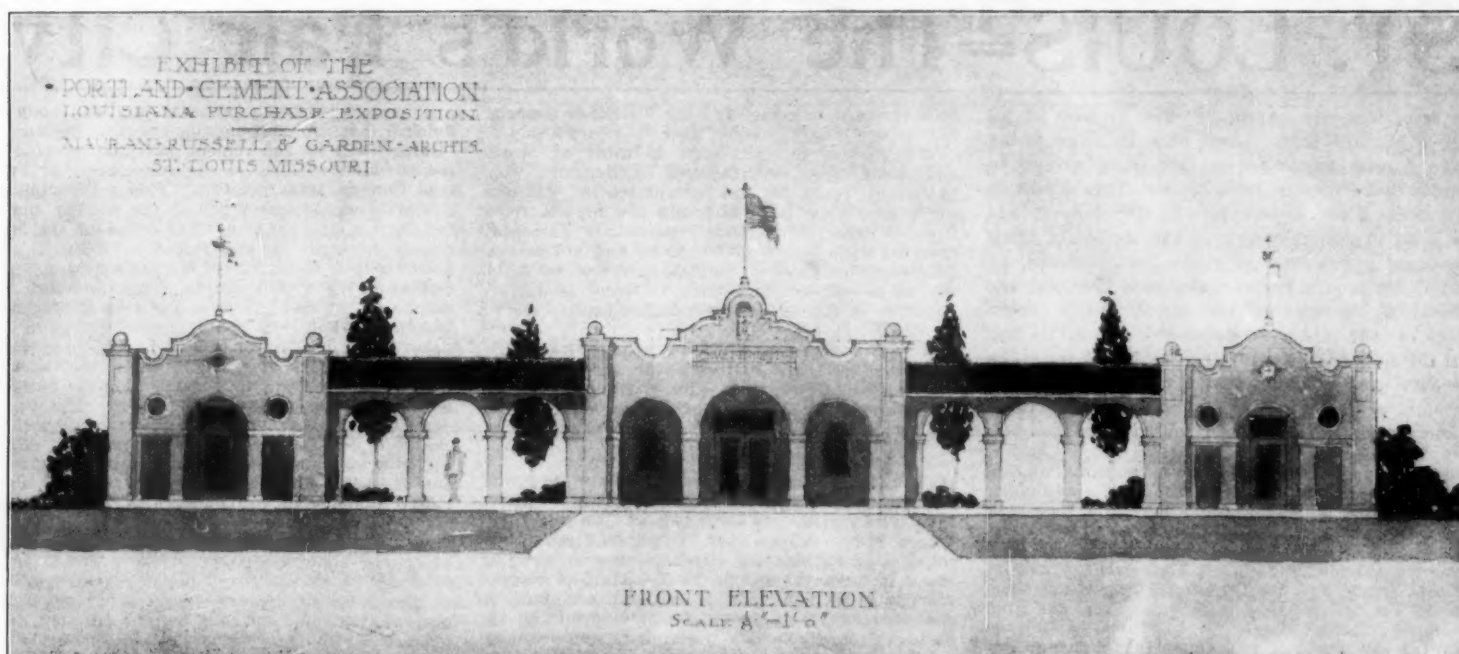


Exhibit of the Hydraulic Press Brick Co., in Palace of Mines and Metallurgy,  
St. Louis, Mo.



ure is a mantel built entirely of white tile, and with all the corners mitred. This has a very handsome appearance. There is also a tile bathroom complete with tub and washstand. The secretary of the company, Mr. F. W. Braunstein, was here, and speaking of business, he said that it had been affected by the unusually severe winter, but that it had improved during the last month and it now looks as if things will be extra good this summer. This applies to the general line of tiling for floors, walls and fireplaces.

In addition to the clays shown in the different State exhibits samples are shown by individual exhibitors. One of these is the American Kaolin Co., Akron, Ohio, which has an exhibit of kaolin from its Missouri mines. This is a remarkably fine clay. I. Mandle, a dealer in St. Louis, shows a number of clays from different parts of the country and used for various purposes, for pottery, chinaware, for loading paper, or as "fillers" for various articles. In addition to the clay eaters of the South, there are others who are clay eaters without knowing it.

#### Mechanical and Industrial Exhibits.

Among the clay machine men the most noticeable exhibit is that of the American Clay Working Machine Co., Bucyrus, Ohio. This was complete about two weeks ago. Next to it is that of M. F. Williams, St. Louis, who shows the latest example of one of the crushers, or hammer pulverizers. Another exhibit in brick making, though not of clay, is a complete sand-lime brick plant, by means of large models. The manufacture of sand-lime brick is just now attracting considerable attention, being a new thing in this country, so much so that the dry press machine men find that nearly 95 per cent. of the inquiries for presses are for sand-lime brick.

In another part of Mines and Metallurgy is a pagoda of marble and an apartment entirely furnished in rare American onyxes. Systems of aerial transportation are shown, and out in the Gulch a Zanesville concern is operating a fully equipped pottery and kiln. Turning to the more popular exhibits we are promised a twenty-mule team, driven by one line, by an experienced Western driver. This is the kind of team used in carrying borax across the Western deserts. In addition to this there is to be a burro train, loaded and in service, similar to those used in our most inaccessible mountainous districts. We pass among the whole range of mineral products, from the most staple and valuable, coal and iron, through the long list of rock products, building stones, cement, limes, sands, gold, silver, copper, lead, zinc and other ores, jewels, etc., not forgetting that very important division, mineral fertilizers.

#### TRADE CONDITIONS.

ST. LOUIS, April 29.—The building trades in St. Louis and the immediate vicinity are not any more busy this month than last; that is to say

outside the World's Fair, which is entirely abnormal, and which is looked upon by many as a disturbance instead of a benefit to the trades. The returns show that a number of permits have been issued for new buildings, but these will not necessarily be pushed to completion at once. The architects' offices are full of plans for proposed work, but everything that can be conveniently held in abeyance will be kept until the principal work of the Fair is over. The extravagant wages paid there have a double-edged effect; they not only increase the cost of building to a prohibitive extent, but they attract thousands of workmen to this city. Many of these workmen are not given to providing for the future, and when the rush of work is over the improvident ones will be stranded here, the same as those were in Chicago in 1893. Labor will then be less exacting in its demands. Carpenters will not dream of a dollar an hour and brickyard laborers (colored) will not get \$2.25 a day for loading ordinary paving brick, which is being paid in a St. Louis yard at the present time.

#### Terra Cotta.

The Winkle Terra Cotta Co., of St. Louis, has very little to report in this district, for the reasons referred to above, but it has a good contract in hand for a fourteen-story office building at Seattle, Wash. The terra cotta will amount to about ten car loads and the contract is to be completed in June. Another job is the Ross Library at Blue Earth, Minn. The terra cotta for an Anheuser-Busch brewery in Grand Rapids Mich., is ready to ship.

Mr. George R. Chambers, second vice-president of the principal terra cotta plant on the Pacific Coast, the Gladding-McBean Terra Cotta Co., San Francisco, was a visitor in St. Louis last week. He was accompanied by his wife and children, and was on his way from the East. Mr. Chambers was formerly president of the Galesburg Paving Brick Co., Galesburg, Ill., and had been East to close a deal with the Purington Paving Brick Co. This makes the Purington sole owner of the paving brick interests of Galesburg, and it gives it a solid mile of brick plant frontage, without a rival in extent in the whole world. D. V. Purington is probably prouder, in his own secret heart of hearts, of his position as president of this greatest plant on earth than if he were president of the United States, for he has made the thing himself. Mr. Chambers, after closing his deal and turning over the plant to Purington found he had been absent from California nearly a year, so that he could not say much about affairs out there, except that business had been satisfactory. The Gladding-McBean Terra Cotta Co. is the only one on the Pacific Coast that produces glazed, or enameled terra cotta.

#### Lime-Sand Brick Plant.

The Granite Press Brick Co., of St. Louis, has just been organized by E. E. Squier & Co., whose

offices are in the Equitable Building, St. Louis. The works will be at East Alton, Ill., where the company owns immense deposits of sand of excellent quality. The sand is perfectly clean and free from clay. It has been thoroughly tested and found to be suitable for making a high grade lime-sand brick. To spare our friends in the machine business useless trouble I may say that the press, etc. have been practically decided upon.

#### Whiting.

The Western Whiting Manufacturing Co., St. Louis, of which Mr. Alexander Marshall is president, and Mr. Wm. L. Grace secretary and treasurer, is doing good business and is opening up extensive works at its chalk pits near East Alton. Though business is good it was better last year. This is caused by the fact that the plants of a number of customers, particularly in Chicago, were closed for a considerable time through the labor questions. As soon as the weather becomes settled the demand for putty is likely to be large. Prices for whiting are about 60c per 100 pounds, delivered in Chicago, Cincinnati, etc., in car lots. Prices are not likely to go so low as they have been at times in the past. For one reason, chalk, which used to be imported from the English and other coasts very nearly freight free, inasmuch as it was needed for ballast, no longer serves that purpose as vessels now use water ballast instead.

#### Marble.

The Pickel Marble and Granite Co., St. Louis, is not doing much in this territory. It is the old story, prices too high, though there is a considerable demand for marble at the World's Fair for many purposes, principally by the states and foreign exhibits. The company has an important job in hand at Los Angeles, the Hellman office building. Italian and foreign colored marbles will be used there and the contract will amount to about \$150,000.00.

#### Portland Cement.

The St. Louis Portland Cement Co.—Mr. J. C. Robinson president, and Mr. A. H. Craney, vice president—reports that the prices of Portland cement are very materially stiffening. While the railroads have not an equal amount of work under construction to what they had last year, still the extension in the uses of cement has had the effect of stiffening prices quite markedly. It is expected that after the first of May there will be a boom in building in consequence of the many plans in the hands of architects that have been held back for the past year, awaiting more favorable conditions.

On Friday evening last, April 22, there was a meeting of the committee of associated cement manufacturers carrying out the combined exhibit at the World's Fair. The gentlemen present were: Mr. J. B. Lober, president of the Vulcanite Portland Cement Co., Philadelphia; Mr. E. R. Ackerman, president of the Lawrence Portland Cement Co., St. Louis.

(Continued on Page 31.)



## From Our Own Correspondents.

### NEW YORK.

NEW YORK, April 6.—Business in building materials has picked up a little with the partial resumption of work, although there has not been any marked advance in price. Common brick is "off" a little as a natural reaction to the price it had maintained right along, which was proportionally higher than that realized in other lines. The contractors have for a long time protected themselves against strike delays by having a "strike" clause inserted in their contract, but this contention has now for the first time been passed upon and sustained by the courts, as is instanced in a decision of Judge Gildersleeve of the Supreme Court, to the effect that a general strike affecting a contractor will serve to release him from his contract in the meantime.

#### Lime and Plaster.

Mr. Perry, of the Rockland-Rockport Lime Co., said trade had held up pretty well during the month and the outlook was fair. There had been a steady gain in the issuing of building permits and it was fully equal to the volume at this time last year. The immense amount of dwelling house work projected will go far to offset the loss in operations in the line of big down town buildings. There is no change in quotations of lime from last month. Mr. Perry expects to be present at the meeting in Detroit.

Mr. Bryce, of the Associated Lime Co., quotes common at 80c and jointa at \$1.00@1.05. X grade has been steady for the month with nothing much to complain of.

Mr. Wotherspoon, of the Wotherspoon Plaster Mills, said trade had been quiet for the entire month. On the subject of paper bags, touched upon at the Buffalo convention, he said that that solution of the bag question would be a boon. It is an intolerable nuisance; as cement lime, and marble dust bags are included in the return, all of which have to be culled out and returned to the sender practically at the mills' expense. The paper bags are not perfect as yet, although they are made remarkably tough, but it may be that running the plaster in hot, has something to do with weakening the bag. The mill men will do it that way because the plaster runs much more easily when hot; and the bags, to be successful must be able to withstand such conditions.

#### Bricks—Artificial Stone.

Mr. Lounsbury, of Fredenburg & Lounsbury, 289 Fourth Avenue, said that front brick had picked up somewhat with them. Contracting was going on a little more readily and the situation was altogether more promising.

The New York Cement-Stone Co., of 1 Madison Square, is now using its product on a good deal of outside work, notably some bridge work in Newark. They need a place in the city with water delivery and Mr. Scott is pretty busy hunting up and inspecting the number of sites offered.

The Sagus Brick and Manufacturing Co., of Mobile, Ala., has been organized to make sand-lime bricks. A number of prominent business men of Mobile are connected with the enterprise. The system used will be that of the Schwarz System Brick Co., of 10 Bridge Street, New York.

The Florida Brick Co., of Leesburg, and Tampa, Fla., which will manufacture sand-lime brick, is now under way and will also use the system of the Schwarz System Brick Co.

The Schwarz System Brick Co., of Canada, has its main office in Montreal and is preparing to establish sand-lime brick plants in different places in Canada, the first one being in Montreal.

The Peerless Brick Co., of 13 Park Row, New York, is going into the manufacture of sand-lime brick. Mr. Olcott Payne is the manager. The company has bought property at the foot of 118 East River. It is about half a city block in dimension and has a frontage of 100 feet on the water. Some of the construction contracts have already been let. The sand will be brought by

scows and will be handled by automatic machinery and run into steel cylindrical tanks similar to those used for the storage of wheat. The company will make both front and common brick and is now open to receive bids for the sand handling machinery and the steel storage tanks.

Mr. W. N. Durbin, president of the American Sand-Lime Brick Co., was in town last week in regard to locating a sand-lime brick plant in the vicinity of New York for the American Sand-Lime Brick Co. Mr. Durbin reports that great interest is being taken in the sand-lime brick industry in the Middle-West and the demand for the location of plants is increasing. The company has plants in course of construction at Pensacola, Fla.; Mobile, Ala.; Genesee, Pa.; Fremont, Ohio; Wichita, Kan.; Cedar Rapids, Iowa; and Lafayette, Ind. At Kokomo, Ind.; Deadwood, S. D.; and Antioch, Cal., are plants in full operation. The company has its presses in plants in Ottawa, Can., and Charleston, S. C. In Marion, Ohio, the ground is being staked off and the siding put in, and in all probability the factory will be making brick within sixty days.

A great deal of time and thought has been expended on the problem of how to avoid the unsightly discoloration, or efflorescence that comes out on brick and terra cotta. Gabriel & Schall, of 205 Pearl Street, New York, claim that their preparation, Precipitated Carbonate of Barytes, is a positive preventative of this annoyance. They say that the price, in ton quantities, is very reasonable, and brick makers and terra cotta manufacturers have in it an effectual remedy for this trouble.

#### Cement Notes.

Mr. Joseph H. Loughman, of the Pennsylvania Cement Co., 26 Cortlandt Street, was looking at some men laying brick in an adjoining building. "That is a novel and welcome sight, it is many weeks since I have seen brick laid," said he. Mr. Loughman thought that this last strike, troublesome as it was, might prove to be a blessing in disguise, as it might take the edge off the desire for any further idleness, and we may possibly pass the month of May without the strikes that have been anticipated for that time. The company will soon remove to other offices in the same building. They are very crowded in their present quarters and the new rooms will give them abundant space and accommodation.

Mr. J. Maxwell Carrere, of the Penn-Allen Portland Cement Co., was in town recently on a flying visit to the New York office at 156, Fifth Avenue. He reports things to be rather quiet out Allentown way.

#### Granite.

Mr. J. E. Dutton, 42 E. 23d Street, secretary of "The Granite Manufacturers' and Dealers' Association of New York," says the affairs of the association are coming on nicely. Another meeting was held last week at which two new members were received and verbal applications were put in from several others. The constitution and by-laws originally admitted only those with stone yards in the city, but they have been amended to admit manufacturers who work for the New York market. They have all full privileges except those of voting on local trade and wage questions. The association has now been organized under the laws of the State of New York, giving it a full legal incorporation. Mr. Dutton said the outlook for granite work was good with plenty of work in sight.

The old Emerson Troy Granite Co., at Fitzwilliam, near Keene, N. H., has taken on a new life with the accession of some new York capital and is ready to handle whatever comes its way.

Mr. H. L. Brown, resident agent of the Woodbury Granite Co., No. 9 E. 42nd Street, said the prospects for a busy season were very good. On the two new stations, those of the New York Central and the Pennsylvania, the amount of granite work will be without doubt \$4,000,000.00 and will probably run up to \$5,000,000.00 and perhaps \$6,000,000.00 and the new Congressional Building just decided upon, at \$2,250,000.00, will add largely to the chances of there being something all around.

Up in Bethel, Vt., there is a granite quarry which has never had more than a local trade or enjoyed more than a local name, but it yields a beautiful grade of granite, some samples of which Mr. Brown had in the office. It is like a pure marble against the ordinary white granite, which latter shows as a dark gray by contrast; and it holds its own for whiteness against marble, it simply being a shade warmer. It sells for about a third more than ordinary granite for the reason that it is as white and smooth as marble, with many times its durability. It is exceedingly close grained which adds to its hardness and enables it to take a very fine polish. It has been used in Payne

Whitney's house on Fifth Avenue and in the approaches to the Newark, N. J., court house.

The Newport Granite Co., of Albany, N. Y. has in their New York office at 1133 Broadway some beautiful samples of the stone from their Vermont quarries. It is very clear and bright and sparkles with the quantity of crystals it contains. The company has been getting out some blocks of this 15 feet square.

Mr. K. F. Albertson, of the New York Granite Co., 1133 Broadway is down East in the quarrying district for a short stay there.

Mr. Arthur Wells, 1133 Broadway, said the slate business had been running rather easy for the past month. Contracting had been a little slower, which might be taken as a reflex of the doubt occasioned by the disturbed building conditions.

Mr. F. B. Vail, of the American Air Compressor Co., 26 Cortlandt Street, has just returned from a trip to the New England granite fields with his hands full of business.

#### Machinery.

The J. R. Alsing Co., of 136 Liberty Street, New York, has just erected a large plant in Maryland equipped with the company's mills for grinding flint and spar which are to be reduced to a great fineness for pottery, glass-making and enameling purposes. They have also received orders from Norway, Europe, for mills for the same purpose. They sometime ago made an experimental machine to be tried on the pulverizing of some exceedingly stubborn fibrous matter in Mexico, and it proved so successful that new machines have been ordered for the permanent carrying on of the industry. Mr. Abbe will soon go to Maryland to supervise the erection of the plant above referred to.

Mr. Alston, of the Alston Stone Sawing Machine Co., went to England on the 13th of April to set up one of the company's sawing gangs in Lancaster. The machine was made here, as the company found that it was in every way more advantageous for them than to have it made on the other side. Mr. Alston will return about the 1st of May. The company is having continued success with its gang attachments and the more extensive and thorough are the trials of it the more extended is its use. The Norcross Bros., who have had seven in use have just ordered three more.

The Arkell Safety Bag Co., 95 Broad Street, makes a paper bag lining for cement, plaster and lime barrels. It is made of very tough paper and being made with crinkled folds, like pleatings, it is capable of distension and will give without tearing if the barrel is subjected to compression. The plain bag is loss proof, while another made with an impervious inter-lining is water proof in addition. Mr. Blanchard says that its use is growing largely amongst the cement men and others, owing to the present sharp competition and low prices which cause all economies to be considered, including this of barrel waste which hitherto has has not been seriously considered. But the poor coöperation stock causes a greater waste than ever before, and this alone is bringing about a general use of the linings.

The Automatic Weighing Machine Co., of Jersey City, is steadily working its machines into favor and use with the cement companies. Their latest order is from a Portland Cement Co., as far away as Texas.

H. G. Kotten, 20 Liberty Street, is very busy working to keep up with the spring orders for his pneumatic tools, which come in in a way that indicates a certainty of active business in the stone trade. He is now compiling a new catalogue, which will be very full and complete and will comprise details of half a dozen new tools. It will be ready for distribution in about two weeks.

The Pulsometer Steam Pump Co., will remove on May 1, to larger and more convenient offices at 17 Battery Place, the Whitehall Building. They will temporarily retain their present place at 131 Greenwich Street for storage and retail delivery purposes until they have acquired another situation for that end of the business also.

Mr. H. G. Kimble, of the Kent Mill Co., 170 Broadway, has gone on a four or five weeks trip, which will embrace a tour amongst the cement factories as well as an extended visit to the phosphate sections.

The New Galilee Brick Co. is being incorporated to manufacture brick, tile and other articles of clay. The headquarters of the company will be at Greenville, and the plant will be located at New Galilee, Pa. The officers of the company are: W. H. Anderson, C. S. Dille, P. P. Simpkins, John Ridgeway, S. S. Barnes, G. A. Barr, Hugh Mahan, Thomas Mahan, B. F. Huber, S. S. Ridgeway, C. P. Schadt, Ralph Moyer, Lewis Hittle and J. L. Wiley.

## PHILADELPHIA.

PHILADELPHIA, Pa., April 27.—The promise of good weather at the beginning of April having failed to materialize, there has been a check in the upward tendency of everything in the building and construction trades in this locality which was manifested a month ago. April weather has been more like the expected March weather and it is usually one of great activity, but this year it records a comparatively small volume of business.

## The Cement Situation.

The cement manufacturers are unanimous in declaring that trade is very dull with prices extremely low. Sales of cement are being made as low as 90c a barrel, and in some instances there are large movements, indicating a disposition to put in goods at a low price. While there is a hope that trade will improve—in fact, the last few days have shown some signs of revival—it is not to be expected that prices will be anything like those of last year. Some manufacturers predict that such prices will never be realized again. While there has been an enormous increase in the demand for cement, there has also been an enormous increase in the production. The general opinion is that much capital has been attracted by the high prices heretofore obtained, to such an extent that the plants now in operation and those in course of construction have increased their producing capacity beyond the increase of the demand.

While the domestic producers view the situation through blue goggles, the agent of the foreign manufacturer is well nigh in despair. The representative of one of the big German concerns with whom I talked, said frankly that foreign business is now practically nil. With freight and the duty to pay, the imported product costs about twice as much as the domestic article. In spite of this, there are some purposes for which the consumers are willing to pay the extra price to get imported cement.

The figures showing the importation of two million barrels last year are deceptive so far as the Eastern trade is concerned. The great bulk of this importation goes to the Gulf and Pacific ports, it being generally shipped in sailing vessels as ballast, and in this way gets in at a nominal cost for freight. Then, too, there is not so much competition by the domestic article in the far West and Southwest. There are only two large plants in successful operation on the Pacific Coast and a considerable portion of the cement used there is imported.

## Unsatisfactory Prospects.

The local building situation is most unsatisfactory as compared with the records of last few years. The figures show a falling off of almost \$10,000,000.00 for the first four months of 1904, as compared with the same months of 1903. This is about 50 per cent. of all the business. This condition follows as a natural result of the unusual activity of the last few years. There has been quite a boom in factory and office buildings, but the demand has been supplied and there is no big construction in prospect. What is being done now is largely confined to residences and smaller business houses.

Concrete construction is growing in favor and the largest mercantile establishment now being erected in Philadelphia will be entirely of this new material.

The labor situation is quite threatening. The present contract between the Building Trades Council and the Master Builders expired May 1, and there is a hitch in the negotiations for an agreement. A general strike is threatened and the trade will feel much easier when all the differences have been adjusted.

## A FEW CHATTY INTERVIEWS.

"The market is flat," said Mr. Harding, of the Vulcanite Co. "Prices are at the bottom and trade is very dull. We can not tell anything about the future, but I do not look for such a trade as we had last year. Local building operations have fallen off heavily, and the fact that this is a presidential year is bound to have a bad effect."

Mr. Levy, of the Alpha Portland Cement Co., reported the largest movement of cement by his company in its history in this immediate locality, but some of the other offices have not done so well. He was disposed to take a hopeful view of the future. "While business has been generally slow, especially for the Eastern trade, it should soon

show improvement. The opening of navigation on the lakes is a month later than usual. In fact, it is just within the last few days that navigation has been opened at Buffalo for the Western lake ports.

"All sorts of building materials are very low. I never knew prices to drop to this extent without a stimulating effect on the building trade, and I look for the same result this year."

Mr. Charles Warner, of the Chas. Warner Co., dealers in cement and extensive lime manufacturers, said trade was fairly satisfactory. "In the cement line business is dull, although some consumers are taking advantage of the present low prices and are placing large orders ahead. The slow season has been largely on account of the weather. As late as April 20 one of our men reported sleighing in Western Pennsylvania and we can not expect the situation to be different under such circumstances."

Ronald H. Barlow, of the American Cement Co., reports a dull April, but says the outlook is more favorable. Trade is already improving and he expects May to make a much better record. "It has been a hard season for the cement manufacturers," said Mr. Barlow, "but they have kept a stiff upper lip and are hopeful of a reasonably satisfactory year's business."

At the office of the Hartranft Portland Cement Co., there was the same story of a backward spring business. "The winter began at Thanksgiving," said Mr. Nash, "and has been holding on steadily ever since. In many instances, work begun last fall has not been resumed, or is just being resumed and there are supplies on hand that were purchased before the winter began. However, we have had business just as dull at this time of the year as it is now and by the end of May have had all we could handle at good stiff prices. It may come with a rush this year."

## SYRACUSE.

SYRACUSE, N. Y., April 15.—The Paragon Plaster Co., of which William K. Squier is manager, has awarded to the American Sand-Lime Brick Machinery Co., the contract for the erection of a large sand-lime brick plant to be located on the company's property in the Ninth Ward, and at the same time announcement is made by the company that they are about to add another branch to their business in the way of manufacturing Portland cement two-piece hollow building blocks. Mr. Squier says the company has further plans for the enlargement of the business and will soon be making sand-lime brick. This is a comparatively new industry in this country and involves a large expenditure for equipment. The machinery company manufactures the entire equipment, including boilers, engines, cylinders, cars, mixers and presses and have part of the outfit ready to ship here as soon as the building is completed. The building will be erected as rapidly as possible.

During the last eighteen months Mr. Squier, in company with former Mayor Jacob Amos has visited most of the operative plants in the United States, and since early fall they have inspected the most up-to-date factories and studied in detail the different processes employed. It will go without saying that sand-lime brick of different values will be made in America, as they are in Europe, and it is also true there is a great difference in the worth of clay brick, but the Paragon Plaster Co. are confident they will be able to produce a high-grade brick in the very near future. The directors of the company, at a recent meeting, decided to immediately undertake the manufacture of sand-lime brick or sandstones, as they are called abroad.

## Sand-Lime Brick Not an Experiment.

In discussing the establishment of the brick department yesterday Mr. Squier said: "It is not generally known here that a high grade sand-lime building brick has been made in Germany, Holland and other European countries for a long time. Over a quarter of a century ago, Dr. Michaele, who is the pioneer in this line of work, manufactured some brick of this kind, but for the first fifteen years little progress was made in the art, and it was not until his patent expired and the process became available to anyone willing to make the necessary investment that marked im-

provement was made. During the past ten years sand-lime brick has made rapid strides in the building material world, and the manufacture of this type of brick is now being carried on at over 125 factories abroad and at least twenty different places in this country.

## Specified in Government Contracts.

Our war department has specified sand-lime brick in buildings now being erected in the West, and they have and are being used very extensively by the German Government. At The Hague many beautiful houses have been constructed of this brick. The manufacture of sand-lime brick in the main is very simple. What takes place in the formation of a limestone and the process employed accomplishes in twenty-four hours what nature takes, possibly, as many centuries to develop. Sand and lime are combined in the proper proportions, pressed into bricks, which are loaded on cars and run into cylinders and there indurated. Brick made to-day can be laid in the wall to-morrow. The natural color of the brick is a pleasing light gray. Some factories are turning out colored brick, and ultimately they will be made here. The great laboratories of America and Europe long ago demonstrated that these bricks would stand intense heat as well as freezing and thawing. Bricks that we have alternately frozen and thawed during the past winter indicate plainly that this rough treatment tends only to harden them, showing that like many natural stones they grow harder by exposure. The absorption test is low and the tensile and compression strength exceedingly high.

## NOTED AT SYRACUSE.

W. Judson Smith has under consideration the establishment of a brick works on his farm near Pleasant Beach.

The Onondaga Stone Co. has been incorporated with a capital stock of \$50,000.00. The directors are: James VanOram, William C. Brame, Charles A. Knickerbocker and O. H. Paddock.

Asa L. Merrick, of the firm of Merrick & Randall has returned from Gainesville, Ga., after having spent six weeks in the South looking after his interests in the Georgia Mica Mining Co. The property is being developed rapidly and is valued at \$1,000,000.00. Mr. Merrick will return to Gainesville soon.

J. C. Esser, who operates a stone quarry here, has just completed his contract for the moving of a ten-ton boulder from a quarry at Jamesville to the grave of Robert Dunlop in the village cemetery. The stone will be suitably engraved with a copper plate. Mr. Esser feels jubilant at the success attending the removal of the boulder and considers the feat a remarkable one. The selection of such a mammoth tombstone was made by Mr. Dunlop before his death and provision made for moving it in his will.

I. Tellado, of Cuba, who has been in this country investigating the salt industry, came here from Washington last week. He says that he has gained many ideas regarding the manufacture of salt, but that many of them he does not consider practical for the industry in Cuba.

Syracuse monument dealers and proprietors of quarries are about to reap a harvest and anticipate the busiest season in years. There are large numbers of bodies being removed from the vaults to be buried every day, and already many orders are being received for headstones and monuments. It was learned to-day that at three cemeteries there are 216 bodies in the vaults.

A new \$75,000.00 Federal building has just been completed at Rome, N. Y. It is of pressed red brick, laid in Flemish bond. The cornices and outside trimmings are of Indiana limestone.

George A. Bare, of Philadelphia, Pa., is building under contract, rather a unique sewer in the outskirts of Philadelphia. It is known as the Shunk street sewer. The sewer runs through a bed of black ooze. Owing to the nature of this material and the low land, the fall in the sewer is very slight, only about two feet to a mile. The sewer is built of brick, stone and Portland cement, and is ten feet in diameter. In order to get the foundation it is necessary to drive thirty-foot piles every few feet. To these piles are bolted ten by twelve stringers, on which are spiked 4-inch blocks. This forms a foundation for the sewer. There are not very many men who would care to tackle such a proposition as this, because to lay a sewer on any other foundation than that indicated would probably mean that the sewer would disappear.

Write ROCK PRODUCTS advertisers when wanting machinery or supplies.



## CHICAGO.

CHICAGO, ILL., April 27.—The backward spring or the late winter, as it always does, is trying the patience of all dealers in building materials in this latitude. Hundreds of workers in concrete and cement are idle and material men complain with a good deal of emphasis over the weather conditions.

## The Cement Outlook.

A round among some 25 or 30 cement and concrete firms fails to elicit anything of general or special interest in these lines of trade. The quarries are almost idle. The prospects, however, are exceedingly bright in the building line, and the season will be an active and stirring one.

Powell Bros., cement contractors, say they are awaiting better things soon. They have ample work on hand. They are satisfied with the outlook, and expect to have a busy season.

The Senel-Solvay Co. is building an immense coke oven plant in south Chicago, which calls for the use of a very large amount of building materials.

The Alpha Portland Cement Co., 741 Marquette building, handle a large amount of this material during the season, and report prospects good. They handle a cement which they consider A1 in quality, and is about all that a good cement should be.

The Chicago Crushing Stone Co., office 928, No. 108 LaSalle Street, are largely interested in street contracts, but furnish large amounts of stone for both private and public building foundations. They have all the work they can do from now on to the end of the season.

## Brick Conditions.

Since the beginning of March the brick market has been subject to some remarkable changes. I noted in a letter a few weeks ago a decline in prices to \$4.00 per 1,000, and in April number of this paper an advance in prices to \$6.50. A call at the office of the Illinois Brick Co., in the Chamber of Commerce building this morning, enables me to report a still further advance of brick to \$7.50@8.00 per 1,000, 10 per cent. discount being allowed at the upper price. As the company controls nearly all the brick-making yards here it is able to fix the prices at its own figures, and others outside simply conform to them. At the present time many of the yards are lying idle, and only a few have been running for some time past, but during the coming week most, if not all, the idle yards will resume work, giving employment to several hundred men. The demand for brick has been quite active, and with many buildings to be constructed as soon as the weather will permit, and a good outside demand, it is not thought probable that prices will rule any lower for some time to come.

## The Lime Situation.

The lime makers are not in a very happy mood. They are in a condition to meet all the demands that are likely to be made upon them during the season. The price holds steady up to this writing at about 65 cents.

The Stearns Lime and Stone Co., 165 Randolph Street, are shipping lime to Pittsburg, and can lay it down at about \$1.00. Quite a number of orders for lime have been received from outside points, for many of the smart interior towns in this and adjoining States, have quite a building boom on. There is a project on foot here, started by some interested Eastern parties to build a plant for the manufacture of hydrated lime. Sales of this lime have been made here at from \$6.00 to \$6.50 per ton, but these prices are placed on it as feelers and would probably not be duplicated to any extent.

The lime dealers in this city produce a good lime, and it can always be had fresh, which enhances its value when used in any important work. Another thing in this connection is on the tapis, and that is that lime and stone men intend in the future to make their contracts more binding than they have heretofore, either with the builders or the contractors. The lime men say they have lost considerable sums of money through contractors by not having a strong and binding agreement.

## A Word About the Quarries.

The Hon. J. M. Brenton, Des Moines, Iowa's, famous ex-Mayor, was in town last week buying some machinery for his stone quarry, near Des Moines. He is devoting his entire time to the

stone business. He has a good plant, consisting of Gates' crushers, steam drills, hoisting engines and other quarry appliances. He has a good signed contract for crushed stone with the U. S. Government for work at different army posts, also with the Barber Asphalt Co., for concrete stone and other similar work, and anticipates a very busy season. Mr. Brenton, familiarly known to every man, woman and child in Des Moines as "Jim" Brenton, is one of the most unique characters in the work. He is one of the best campaign orators in the country, and can talk on almost every subject in the most interesting and characteristic style, from crushed stone to a lecture before a woman's aid society.

Watt Bros., of Herring, Ohio, were in the city the other day on business and pleasure, and say that they have all the work they can do for their Gates' crusher, and that stone road work in their locality will be very extensive this year.

Chas. Crooke, of the Bessimer Limestone Co., Youngstown, Ohio, was in the city a day or two ago to attend the funeral of Mr. George E. Smith, late in the employ of the firm of Allis-Chalmers Co., mention of whose death is made elsewhere in this number of Rock Products.

## Mr. Hoyt Retires.

Mr. H. W. Hoyt, second vice president and general sales manager of the Gates Iron Works, has retired from the Allis-Chalmers Co. Mr. P. W. Gates, whose father was the founder of the Gates Iron Works, and was general superintendent of the Gates plant of the Allis-Chalmers Co., has also retired from the firm. Mr. Hoyt and Mr. Gates design to spend a year together touring Europe.

Mr. J. B. Allen, general manager of the engine department of Allis-Chalmers Co., has retired, after having served the company for nearly thirty years.

## LOCAL CHATTER.

The brick yard property of the Hoyt & Alsip Co., comprising forty acres except streets, at the southwest corner of Robey and Forty-third Streets has been purchased by Richard Fitzgerald, vice president of the Chicago Junction railway, for \$75,000.00.

A large building contractor, Mr. Eugene Prussing, told this writer to-day that given fair weather a big building boom would commence in Chicago. The fortunate condition of the building lines is due, he says, to the high and advancing rentals which landlords are compelling tenants to pay. He says that \$6,000,000.00 of new buildings are already in sight, and this is why material men, dealers in lime, cement, brick, stone and concrete are anxious to begin the season's work.

The Chicago Crushed Stone Co. has notified the Drainage Board that it will seek to recover the sum of \$75,000.00 for damages alleged to have been caused by the overflow which flooded the plant on the Desplaines river near Lemont. The company suffered severely from water in its quarries during the recent period of high water.

It is said that thirty-one brick yards in this county will be tied up by a strike of brick-makers on May 2, but this is not likely to happen, as this company and the American Brick Co., have signed an agreement, which is regarded as one of the most far reaching in existence. The Chicago Brick Co. has also joined in and signed the agreement. Peace seems therefore assured.

## MEMPHIS, TENN.

MEMPHIS, TENN., April 25.—The lime, cement and general rock product lines are catching the spirit of spring these days, and there is considerable activity in Memphis. Here in Memphis the numerous residence subdivisions are creating considerable building. The city fathers are making extensions in pavements while the sun shines and will utilize some of these products in the several thousand dollar contracts that will be worked on this summer and fall, to prevent any more overflows by the Wolf river route and to those manufacturing plants in North Memphis, that is, if municipal levees can prevent it.

The Miller Paving Co. of this city has captured several extensive contracts in Southeast Memphis in the real estate subdivisions and is full up on work.

The Memphis Hydraulic Stone Co. will really, this summer, for the first time, have a chance to extensively use and push its manufactures. Last fall a few handsome homes out near Overton Park and out of the city, were erected of the product,

and are quite handsome monuments to its utility. Mr. Wright, long identified with lime interests here, is connected with the manufactory, but is still in the lime business also.

Over in the industrial village of Blytheville, Ark., the Blytheville Brick and Tile Co. has been incorporated with a capital stock of \$10,000.00. J. H. Edwards is president; H. C. Davis, vice president and R. L. Morris, secretary.

Morris Bros., of Memphis, have been fortunate in capturing a monument contract that will give them an opportunity to show their good work to advantage. Over at Dyersburg, Tenn., the committee in charge let the contract for building the Confederate monument to this firm, over bidders from Nashville, Paducah, Covington, Humboldt, Dyersburg, Jackson and other Memphis firms, Morris Bros. presenting the lowest bid. The work will be completed and ready for unveiling on November 30, next, the fortieth anniversary of the battle of Franklin.

The Central Phosphate Co., of Mt. Pleasant, Tenn., has lately received an order for 10,000 tons of export rock to be delivered right away. The firm will have to run a crew day and night to fill this order, and employ an additional shed crew.

H. G. Ruhm, of Mt. Pleasant, Tenn., has acquired within the last few days a fine body of phosphate land one mile of Centerville, from N. C. Gilmer. The consideration was \$10,000.00. Mr. Ruhm thinks Hickman County in which Centerville is located, is certain to be a future phosphate center.

Frank M. Griffin is shipping some phosphate from a farm he purchased near Gallatin, Tenn., a short time ago. He has taken out already 100 tons and the supply seems good. Some years ago he owned a phosphate producing farm in this same county which he sold to the Sumner Phosphate Co.

Michigan capitalists have been prospecting at Summitville near McMinnville, Warren County, and here with a view to erecting a \$250,000.00 cement plant at the former place if the tests prove satisfactory.

Roy Murrel has secured new quarters and better for his marble establishment at Martin, Tenn.

Speaking of those industrial villages of Arkansas, Forrest City, one of the enterprising towns of Arkansas, has added another manufacturing enterprise to her list in the Choctaw Brick and Tile Co. This is incorporated, G. B. Pettus, president, is also president of the Forrest City Bank, and a member of the firm of Pettus & Buford. J. H. Gunther is vice president and manager. Mr. Gunther came to Forrest City from Decatur, Ill. Eugene Williams, cashier of the Forrest City Bank, is secretary and treasurer. The plant covers seven acres of land.

At Oxford, Miss., the Oxford Brick and Tile Co., is a new concern that has almost completed its plant. B. F. Kimbrough is president; Will Lewis, vice president, and J. J. Vance, secretary and treasurer. The capital stock is \$10,000.00.

The Rockwood Brick and Tiling Co., of Rockwood, Roane County, Tenn., has been incorporated with a capital stock of \$5,000.00 by M. F. Millican, M. H. Phillips, J. F. Register and F. C. Copeland.

The charter of the Globe Phosphate Co., of Pennsylvania, a \$100,000.00 incorporation, has been filed in this State.

The Chattanooga Pottery Co., at Daisy, Tenn., a little way out from the city of Chattanooga, will enlarge its plant materially. It has been recently purchased from T. G. Montague by the United States Naval Stores Co. The company will add three new kilns for the making of pots, each with a capacity of 100,000 pots. Chas. R. Krager, manager, has lately been on a trip North looking after the selection of the equipment.

A new organization at Chattanooga is the American Lava Co., with a capital stock of \$20,000.00. The incorporators are: T. G. Montague, Frank Spurlock, Bryan T. Bost and Paul J. Kruesl. The purpose of this company is to manufacture slate pencils, crayons and other specialties in talc and similar materials.

## Changes at Marion.

MARION, OHIO, April 25.—B. F. Waples, who has been Mr. Christian's assistant in the management of the Norris-Christian Stone Co.'s business at Marion for the past fifteen years has resigned his position to assume the cashiership of the Marion Savings Bank. J. F. Dornbaugh, son-in-law to Mr. Christian, who has been the chief bookkeeper of the Marion Steam Shovel Co., for the past twelve years succeeds to the position vacated by Mr. Waples.

# Cement.

## Statistics of Portland Cement.

PHILADELPHIA, Pa., April 23.—The most significant feature of the statistical statement issued by the Association of Portland Cement Manufacturers herewith presented is the decrease of importations and the increase of exports. February, 1904, shows a falling off in Portland Cement of 61,964 barrels valued at \$71,132.00, while the decrease for the eight months, as compared with the previous corresponding eight months is 770,496 barrels, valued at \$876,297.00. The increase in exports amounted to 19,661 barrels, valued at \$23,820.00. This is the first time in the history of the cement trade that there has been such a sustained decrease in imports. This does not mean a falling off in consumption, but a substitute of home products.

Imports have at no time during several years past kept pace with increasing demands, and while domestic manufacture has increased enormously there has also been a steady increase in imports, but the development of the home industry has finally turned the tide against foreign producers.

## The Tendency in Mills and Kilns.

One of our contemporaries in the engineering line says that the tendency of to-day is to use ball and tube mills in preference to the different forms of grinding mills in reproducing cement clinker. Also, that while rotary kilns for burning cement have been built as large as 10 feet in diameter by 130 feet long, 6 by 60 feet is still the standard. This, however, does not compare well with our observations of equipments being put in during the winter, for we have noticed in addition to the tube, ball and Griffin mills for reduction, several plants have put in impact pulverizing and the roller mills such as the Raymond Bros., Impact Pulverizer Co., of Chicago, Ill., build, and seem to be getting good results, too. In the way of kilns there are probably more kilns built 6 ft. 6 in. to 7 ft. in diameter and 90 to 100 feet long than any other size.

## Causes of Unsoundness in Cement.

W. P. Taylor has done some thorough and extensive experiments with Portland cement in the way of testing for soundness and locating the causes of unsoundness, which results were recently published in the *Engineering Record*. He attributes unsoundness of cements to one of the following causes:

- First, free lime.
- Second, incorrect proportioning of the materials.
- Third, under burning.
- Fourth, lack of seasoning.
- Fifth, coarseness of grinding which prevents hydration during the setting up.

Normal tests are always best, but there are many tests known to the cement manufacturer and cement user, as accelerated tests—tests which are designed to show in a very short period whether the cement will stand the racket through long periods of time.

The data compiled from over a thousand tests of many varieties of cement showed that 86 per cent. of the samples which failed in the boiling test showed failure in the cement within one year's time. Of those cements that passed the boiling test but one-half of one per cent. showed signs of failure in the normal pat test, but 13 per cent. lost strength in one year's time.

High lime seems to be one of the dangerous elements, because it is very apt to stand the boiling test all right, and show weakness within a year. A cement used neat is more apt to show failure than a cement which is mixed with sand. The more sand there is in the mixture the less will be the lack of consistency in the volume of the cement show itself. The accelerated test should not be applied at once but preferably after the twenty-eight day brick has been broken.

## Imports of Portland, Roman and Other Hydraulic Cements

MONTH OF FEBRUARY, 1903			8 MONTHS ENDING FEBRUARY, 1903	
COUNTRY	BBLS. 380	VALUE	BBLS. 380	VALUE
United Kingdom.....	19,715	\$24,892 00	104,658	\$ 129,925 00
Belgium.....	70,735	78,359 00	627,622	693,026 00
France.....	1,584	2,742 00	12,150	19,191 00
Germany.....	45,462	51,984 00	1,274,743	1,581,497 00
Other Europe.....	.....	.....	17,632	19,568 00
British N. America.....	.....	.....	2,929	6,381 00
Other Countries.....	11	36 00	3,751	5,580 00
Totals.....	137,706	\$158,013 00	2,043,485	\$2,455,168 00

## EXPORTS.

February, 1903..... 7,888 barrels, value \$ 11,253 00  
Eight months ending February, 1903..... 180,341 barrels, value 279,906 00

## Imports of Portland, Roman and Other Hydraulic Cements.

MONTH OF FEBRUARY, 1904			8 MONTHS ENDING FEBRUARY, 1904	
COUNTRY	BBLS. 380	VALUE	BBLS. 380	VALUE
United Kingdom.....	5,894	\$ 7,381 00	105,985	\$ 127,700 00
Belgium.....	34,978	39,095 00	405,446	463,045 00
France.....	6,998	8,522 00	16,492	23,659 00
Germany.....	24,255	27,731 00	721,242	933,392 00
Other Europe.....	3,598	4,118 00	12,886	13,650 00
British N. America.....	12	26 00	2,350	4,162 00
Other Countries.....	7	8 00	8,588	13,263 00
Totals.....	75,742	\$86,881 00	1,272,989	\$1,578,871 00

## EXPORTS.

February, 1904..... 11,618 barrels, value \$ 21,911 00  
Eight months ending February, 1904..... 200,002 barrels, value 303,726 00

Imports decreased in February, 1904, as compared with February, 1903, 61,964 barrels, valued at \$71,132.00; and for the eight months ending February, 1904, as compared with same eight months previous to February, 1903, 770,496 barrels, valued at \$876,297.00.

Exports increased in February, 1904, as compared with February, 1903, 3,730 barrels, valued at \$10,658.00; and for the eight months ending February 1904, as compared with the same eight months previous to February, 1903, 19,661 barrels valued at \$23,820.00.

## American Association Committee at Saint Louis.

A committee of the American Association of Cement Manufacturers has been to St. Louis, Mo., recently to look over the situation at the Louisiana Purchase Exposition and to complete all arrangement for the cement exhibit. This committee is composed of John B. Lober, of the Vulcanite Portland Cement Co., R. W. Lesley, of the American Cement Co., Philadelphia, Pa.; E. R. Ackerman, of the Lawrence Cement Co., New York; W. R. Warren, The Virginia Cement Co., Richmond, Va.; D. McCool, the Newaygo (Mich.) Portland Cement Co.; C. F. Wade, Omega Portland Cement Co.; S. B. Newberry, Sandusky Portland Cement Co., and J. C. Robinson, St. Louis Portland Cement Co.

This representative group of men is a guarantee that the work at St. Louis has been well done. This was the first general meeting of the committee on the Exposition grounds. It is probable that Mr. R. L. Humphrey will have charge of the testing laboratory.

## Great Cement Meeting at St. Petersburg

The next Congress of Associations for testing materials will be held at St. Petersburg, Russia, in August, and the subject of greatest interest to the cement trade to be considered will be the effect of sea water on cement construction.

Several engineers and experts will take a position adverse to the use of Portland cement for sea walls or for any work exposed to sea water. A report in opposition to their view will be presented in behalf of the cement manufacturers, and it is confidently expected that this report will demonstrate beyond all doubt that cement construction does not suffer from sea water exposure. Manufacturers believe that modern methods leave nothing to be desired in cement work for this purpose, and they have no fears as to the result of the discussion at St. Petersburg.

## Acid-Proof Cement Floor.

A correspondent inquires "Is it possible to make a cement floor acid proof. If so, how can it be done?"

In a strict sense of the word, there is no way to accomplish this, but a well laid and perfectly hardened cement floor may be made sufficiently acid proof for all practical commercial and manufacturing purposes by the use of paraffine. If it is possible to heat the floor by the application of hot metal plates or otherwise to a temperature that would render the paraffine plastic, then it could be smoothly applied upon the surface, making it nearly perfectly acid proof. The paraffine coating would necessarily wear off, requiring a more or less frequent reapplying of those portions most worn, which would probably be a small part of the floor. By this method it would be quite necessary to use sufficient paraffine to at least fill all the pores and irregularities of the cement surface.

Another method which could be used for temporary purposes, is the scattering of lime or some other strong alkali which would neutralize the acids as fast as they might fall. This would be an expensive method, because the neutralizing substance would have to be replaced very frequently, and on the whole a cement floor is not to be recommended where large quantities of acids are handled and are likely to be spilled. However, the paraffine method mentioned above would make an acid proof floor, and it seems to be the only method advisable.

About 73 per cent. of the 20,000,000 barrels of cement was manufactured in the Lehigh Valley. This includes all cement plants within a radius of twenty miles, and located in the Coplay and Nazareth regions of Pennsylvania and Phillipsburg, N. J. There are in these numerous plants some 230 rotary kilns in use. To produce this quantity of cement it required about 5¼ million tons of rock and 2½ million tons of marl or clay, 2,000,000 tons of coal, and 120,000 tons of gypsum. It gave employment to 10,000 men daily.



LOUISVILLE CEMENT.

Interesting and Conclusive Test of Cinder Concrete as a Fireproofing Material.

The consensus of opinion by the experts who have viewed the wrecked zone at Baltimore, without a dissenting voice, is that all the really fire-proof buildings have come out of the conflict practically unscathed and intact, the first reports to the contrary notwithstanding.

By really fire-proof buildings, of course, those are meant where the steel frames are protected by incombustible materials, such as brick or terra cotta. There were a number of such buildings from twelve to eighteen stories high within the fire zone, and structurally speaking, all of them were substantially uninjured. That is to say, the steel

frames were not distorted and the fire-proof partitions and floors were all in place.

Each of the experts, who have written on the subject, and any number of opinions have found the public prints, has an independent view, so widely diverging from the common starting point with their conclusions, that one is tempted to consider the whole argument somewhat covered with mystery and doubt as to just what materials may be selected for the purpose of producing a real Simon-pure and safely-to-be-relied-upon fire-proofing.

Mr. Frank B. Abbott, the well known architect of Chicago, after viewing the Baltimore fire, said: "I consider that the right kind of concrete prop-

feet six inches long by eight inches in diameter, and equipped with a half-pound pressure blast from a Sturtevant blower fan, could be had conveniently at hand. It was decided to make as comprehensive a fire test of concretes as possible, both of Louisville and Portland cement. Four concrete cubes each by measurement four and one-half inches were provided as follows:

No. 1. Louisville cement and stone concrete: 1 part Louisville cement 2 parts sand and 5 parts stone.

No. 2. Louisville cement and cinder concrete: 1 part Louisville cement, 2 parts sand and 3 parts cinders.

No. 3. Portland cement and stone concrete: 1 part Portland cement, 3 parts sand and 7 parts stone.

No. 4. Portland cement and cinder concrete: 1 part Portland cement, 3 parts sand and 5 parts cinders.



Cube No. 1 before the test.



Cube No. 1 after the test.

Cube No. 4 had fused almost through and through and the concrete bond was completely destroyed.

Immediately after removing the cubes from the kiln, while still extremely hot, they were all immersed in water with the following results:

Cube No. 1 was shattered by the slaking of the lime.

Cube No. 2, no perceptible difference after the application of the water.

Cube No. 3, the slaking of the lime rent the pieces apart, utterly destroying all form.

Cube No. 4 burst apart and crumbled.

For the better understanding of the actual result of the experiment, we have provided photographic illustrations of the cubes to which inspection is invited.

The Louisville cement and cinder concrete, as shown by the experiment, is by far the best fireproofing material that was present, and probably has to its credit another element, namely, its rust-



Cube No. 3 after the test.

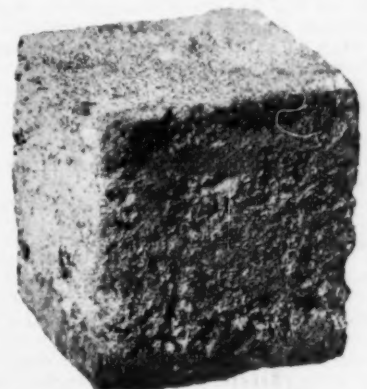
proof qualities, which has been tested out in practice for many years by its use in the filling of fire-proof safes, vaults, etc., that are largely constructed of iron. It has also had an important test in actual use as a fire-proofing material along with steel construction in the city of Chicago. There are a number of large fire-proof buildings in that city in which this material is used, upon which the Chicago Board of Fire Underwriters have placed the lowest rates of insurance, but this experiment is the best real test of its value as an absolute resister of heat.

The cubes were all made at the same time, of the same side materials and were placed in the kiln at the same time, being four weeks old at the time of the experiment. One hundred standard pyrometric cones, furnished by Prof. Edward Orton, Jr., E. M., of Columbus, Ohio, were also placed in the kiln, whose melting points ranged from 1742 Fahrenheit, the lowest, up to 2,066 Fahrenheit, the highest.

Mr. Nicholas Kearns, superintendent of the Hull mill, who had arranged all the details of the experiment, now lighted the lamp and inserted the blast which was kept up for twenty minutes before the kiln was opened.



Cube No. 4 after the test.



Cube No. 2 before the test.



Cube No. 2 after the test.

erly applied is the best fire-proofing which can be used with steel construction, and I would advise the use of Louisville cement in the making of concrete for fire-proofing and rust proofing purposes. I can say that I consider such a concrete, when used in proper proportions, as good as can be obtained for these purposes. I have used it for the past six or seven years, and am still doing so with success."

A very interesting experiment, which practically amounts to a test in the line of a fire-proof cinder concrete, has been recently made by Mr. Wm. Speed, vice president of the Louisville Cement Co. Mr. T. A. Courtenay, secretary of the Western Cement Co., and other gentlemen interested in the subject, at the Hull cement plant of the Louisville Cement Co., where a fire-brick testing kiln four

All of the pyrometric cones had disappeared. There was not a vestige of any of them. Consequently it is impossible to say what degree of heat was attained, except that it was higher than 2,066 Fahrenheit, probably very much higher.

Cube No. 1 came out of the kiln intact, but covered with pure white spots, indicating that the stone had calcined into lime, the concrete bond being well preserved and with slight indications of fusing.

Cube No. 2 came out intact with the concrete bond perfect and one corner slightly fused.

Cube No. 3 had fallen to pieces in the kiln, the stone having calcined and the bond of the concrete was destroyed.

How to Use Cement in Cold Weather.

In cold climates the employment of concrete has its objections, in that the material will freeze before it sets, and upon thawing is found to be practically worthless. In such cases the operation of setting may be hastened by dissolving two pounds of carbonate (not bicarbonate or cooking) soda in one gallon of water; boil the solution and use it in mixing the concrete, with whatever additional water is required; the water and sand should also be heated. The heat will remain long enough to allow the concrete to set, which should be about forty-five minutes. Subsequent freezing, if the mass is not thereby cracked, will not injure the concrete.—Exchange.

The ability of a tile used in moulding concrete work will add to its use.

The Alsen Cement Works will resume operations at once for the season at Hudson, N. Y.

Half the natural cement mills in the Louisville, Ky., cement belt have begun operations, for the season.

The Carolina Portland Cement Co. are establishing a large branch of their company at Henderson, Kentucky.

Ground will shortly be broken for a new cement mill which is to be built south of Bath, near Jacksonville, Pa.

The rapidity of driving, in using concrete piles will not only increase their sale but combat the lumber people on the high priced timber at the present basis.

Work has been commenced on the new concrete dam at Marseilles, Ill., to take the place of the one washed out a few weeks ago. The old dam was built in 1866.

The Connellsville, Pa., Board of Trade, is attempting to raise \$25,000.00 in subscriptions to secure the location of the United States Portland Cement Co.'s plant.

The Racine Cement Walk Co., Racine, Wis., has been incorporated with a capital stock of \$100,000.00. The incorporators are: Wm. F. Neitzel, Samuel Coutts and Maria Neitzel.

The Planet Portland Cement Co. has been incorporated at Albany, N. Y., with a capital stock of \$100,000.00. Those interested are: Joseph Krombach, Louis Jacobs and J. E. Suisse.

The Round Top Cement Co., Hancock, Md., will erect a \$45,000.00 plant 50x120 ft., and a contract for \$20,000.00 worth of machinery has been let. Mr. R. L. Henderson will be the general manager.

The plant of the Iroquois Portland Cement Co., at Caledonia, N. Y., has installed a large amount of labor saving machinery during the shut-down of the winter and has started operations with a vim.

The Lone Star Portland Cement Co., of New York City, has been incorporated with a capital stock of \$10,000.00. The directors are: Baxter Morton, R. L. Peterson and C. W. Sinn, all of New York City.

The Standard Oil Co. is to build a complete refining plant at Kansas City, Mo., to cover twenty acres of ground. The purchasing agent is figuring on a purchase of 10,000 barrels of cement and 100 cars of crushed rock.

Kendrick Promotion Co., of Denver, Col., is preparing to construct cement works of 1,000 tons daily capacity. The plant will also include rock crushers with a capacity of 500 tons daily, and coal grinding machinery.

The Coplay Cement Manufacturing Co., Allentown, Pa., has elected officers as follows: Thomas J. Brady, president; G. Blum, first vice president; Samuel G. Heebner, second vice president; Joseph L. Berg, secretary-treasurer.

The Portland Cement Co., of Denver, Colo., has protested to Congress against the building of cement works by the Government for making cement for the Salt River, Ariz., dam, to be built in connection with the irrigation project.

Leo Haight, of Ft. Scott, Ark., has been appointed receiver of the Southwestern Portland Cement Co., situated at White Cliff, Ark., by the Federal Court. The plant is valued at \$5,000,000.00 and has a capacity of 1,000 barrels a day.

The Glens Falls Portland Cement Co. has made a proposition to its employees for the adoption of a scale of wages giving a 20 per cent. reduction. The plant has been idle for two months and will be started if this proposition is accepted.

City Engineer Thompson, of Seattle, Wash., has given a decision in favor of using several brands of California made cement in public contracts in that city, which it is claimed will amount to a saving of 9 cents per square yard to the city.

The Charles Warner Co., with offices at Wilmington, Del., and Philadelphia, Pa., have issued an excellently illustrated booklet exploiting the uses of their Nazareth cement, having several hundred prominent buildings, bridges, etc., of the highest class to its credit.

The Gold and Cement syndicate has incorporated in New Mexico with principal office at Phoenix, Ariz. The incorporators are: Walter H. Stearns, Pawtucket, R. I., Patrick E. Hayes, Pawtucket, R. I., and Granville R. Budlong, of Providence, R. I.

The Salina Cement Plaster Co., of Kansas, has purchased of the Courtney estate of Grand Rapids, Mich., 98 acres of land on the west side of Grand River, adjoining the property of the Grand Rapids Plaster Co. As soon as spring opens the company will commence the erection of a plant to cost \$60,000.00 or \$75,000.00.

U. R. Loranger, Detroit, Mich., former manager of the Hecla Portland Cement and Coal Co. filed a bill in the United States Court asking for a receiver. The bill stated that they have been wasteful in the expenditure of \$800,000.00, and wants that amount returned to the treasury. He asks that the Detroit Trust Co., as receiver be removed.

Eight hundred members of the Concrete and Cement Workers' Union in St. Louis, Mo., have demanded 5 per cent. increase in wages. C. D. Brainerd, a member of the Cement and Employers' Association, said that the increase would not be granted. The Union expects to win by reason of the delays which they could force at the World's Fair grounds.

The New York Court of Appeals has declared that the old Delaware & Hudson canal is still a public highway. The decision is handed down in the case of the New York Cement Co. against the Consolidated Rosendale Cement Co., which obtained control of twelve miles of the canal extending west from the Hudson river, and attempted to prevent its competitors from using the canal.

The Logan Portland Cement Co., of Fenton, Mich., are out with an interesting prospectus. The officers of the company are: J. H. Logan, president and general manager; W. W. Phelps, vice president and civil engineer; E. A. Hollenbeck, secretary-treasurer, and C. Tinker, attorney, who will be pleased to answer communications regarding its stock, bonds or business that will be of any service of benefit to investors.

A party of Boston capitalists has been organized to purchase the cement land at West Dallas, ten miles from the city of Selma, Ala. This land was the property of Mr. James F. Millhouse and he has received \$40,000.00 in cash and \$10,000.00 of the stock of the company. The plant when completed will represent a \$1,000,000.00 investment, and they expect to make 2,500 barrels of natural cement per day.

The Western States Cement Co. is erecting a very extensive plant at Independence, Kan. One of the principal difficulties that they encounter is the lack of houses for the workmen. The officers of the company say 200 houses are needed at once for the accommodation of the company's employees, and fully this number of workmen will be employed on the work of construction. The company is forced to designate unmarried men for employees. The men and their families will probably have to live in tents until they can get houses or build them themselves.

A concrete wall of 14 feet high and 1,200 feet long has just been completed by the C. B. & Q. railway at Chicago, Ill. This is the first stretch of nearly two miles of concrete wall that will be built by the C. B. & Q. R. R., to support its elevated tracks in the city. The cement embankment is nearly 25 feet wide at the base and 6 feet at the top, and has the distinction of being the highest cement wall for elevated tracks in the city. The wall will probably be completed this season. The work is under the supervision of Engineer Bremner.

The Crescent Portland Cement Co., located at Wampum, Lawrence County, Pa., has installed the coal dust process for the burning of their cement. This is the second oldest mill in the United States, and formerly used the upright or bottle kilns, and later burnt their cement with gas, formed in gas producers. This has been abandoned for the improvement above referred to; their mills have just started up this month.

They are also manufacturers of lump and ground lime and sell by the bushel; 76 pounds to the bushel being the standard.

**Write ROCK PRODUCTS advertisers when wanting machinery or supplies.**

The New Castle Portland Cement Co., New Castle, Pa., has been organized with a capital stock of \$1,000,000.00, by George Greer, Edwin F. Norris and Elmer I. Phillips, of Pittsburgh, Pa. The plant to be erected is to cost \$600,000.00.

Advices from Chanute, Kan., indicate that a very large cement company has been organized and a plant will be erected in the near future on the Benedict branch of the Santa Fe railroad west of Chanute. J. R. Patterson, of the Peerless Portland Cement Co., Union City, Mich., is the leader in the enterprise. They expect to make 3,000 barrels of cement per day as a minimum.

The management of the Iola Portland Cement Co., which recently acquired the plant and property of the Texas Portland Cement Co., located in West Dallas, Texas, has been busily engaged in remodeling and enlarging the works preparatory to resuming operations. M. H. Hammond, agent for the company, stated that the plant is now worth about \$400,000.00, and that the owners are preparing to expend \$150,000.00 for improvements. The plant is being thoroughly overhauled, and will be equipped with modern machinery with a view to reducing the cost to a minimum. The capacity of the plant will be increased to 1,000 barrels a day, and it is claimed that there is a market for every barrel that can be produced.

#### Increased Capacity.

PITTSBURG, PA., April 25.—The Castalia Portland Cement Co. does not handle any building material whatever, except our own make of the "Tiger" Brand Castalia Portland Cement. Last winter our mill increased its capacity again for the fourth time since it was originally built. This is caused by the continued demand for a high grade Portland cement. You are no doubt aware that the raw material from which we make Portland cement differs materially from that of any other cement manufacturer in the United States, as we use travertine in the production of our cement, which is a peculiar deposit and very pure. It is almost identical in its composition with the chalk beds of both England and Germany, from which the highest grades of Portland cement are manufactured.

We look for a good season's business, as many of the bridges washed out in the late flood will require to be rebuilt.

CASTALIA PORTLAND CEMENT CO.

#### A Michigan Center.

FENTON, MICH., April 26.—Mr. E. A. Hollenbeck, secretary of the Logan Portland Cement Co., gives us the following news: "The Logan Portland Cement Co. purchased all the right and title in the interest of the Twentieth Century Portland Cement Co., on August 23, 1903, and annulled their corporation. The Logan company are at present constructing three miles of railroad from the D. G. H. & M. railroad for their plant and expect to have their plant in operation by October.

The Egyptian Portland Cement Co. are in operation turning out 1,000 barrels per day.

The Aetna Portland Cement Co. are in operation turning out 1,000 barrels per day.

The Great Northern will add eight more rotaries to their plant this season, making it a thousand barrel mill.

#### Superfine Plaster of Paris.

DENVER, COLO., April 25.—The Portland Cement Co., of Colorado, are mining a selenite as clear and transparent as glass, from which they manufacture their "Superfine Plaster of Paris"; this is as white as snow and has a very great tensile strength. It is used for fancy work and the finer grades of plaster only. G. W. BARTHOLOMEW.

#### Increased Capacity.

ROSSVILLE, GA., April 22.—We have just completed the installation of additional machinery which more than doubles the capacity of our plant. This move was necessitated by our constantly growing business.

CHICKAMAUGA CEMENT CO.

#### Making 200 Barrels Daily.

BUFFALO, N. Y., April 28.—We have added to our output the Akron brand of Portland cement, making about 200 barrels daily and will increase our capacity if the trade warrants it.

UNION-AKRON CEMENT CO.



# Lime.

## The National Lime Manufacturers' Association.

Meets Semi-Annually.

CHAS. WARNER ..... President.  
Chas. Warner Co., Wilmington, Del.  
PETER MARTIN ..... First Vice President.  
Western Lime Co., Huntington, Ind.  
O. F. PERRY ..... Second Vice President.  
Rockland-Rockport Lime Co., New York City.  
W. B. HILL ..... Third Vice President.  
Ash Grove Lime Association, Kansas City, Mo.  
C. W. S. COBB ..... Treasurer.  
Glencoe Lime & Cement Co., St. Louis, Mo.  
E. H. DEFENBAUGH ..... Secretary.  
Rock Products, Louisville, Ky.

Official Organ, ROCK PRODUCTS.

### LIME EXPERIMENTS.

(Began in the April, 1904, number of Rock Products.)

Coming back to the tests furnished us by the Charles Warner Co., it is worthy of note that in every case the average shows an increase with age. While the experimental details are not given in full, the uniformity of results shows that the work was done in a careful and scientific manner and was well planned, and while the lime company has not intimated anything to that effect, we sincerely hope that they have another lot of samples which can be tested at the end of another year. Every year which is added to such a table will increase its value, and nothing would please us more than to see all of the large lime companies doing systematic and careful experimental work. Let each one take up some particular problem and present the results of his work before the members of the National Lime Manufacturers' Association, so that notes can be compared and results reviewed from time to time. The difficulties met by one man may be the means of solving another's problem.

In *Engineering News*, August 27, 1903, Mr. S. Y. Brigham in stating some of the qualities of quick-lime, which are eliminated by the use of hydrated lime, makes a statement which neither science nor practice will fully prove. This statement is that quick-lime invariably contains small particles which swell after being on the wall a few months, and spoil decorations. Now, this is only the case where slaking has been improperly done, or in cases where there is a considerable amount of free silica in the lime which is only partially converted into a silicate form during the process of burning. Imperfect hydration may be obtained by the manufacturer of hydrated lime. On the other hand, the mechanic is not prepared to give the mixture the same amount of agitation as the man with a mechanical appliance of some sort. Mr. Brigham describes in very general terms, the processes of manufacturing hydrated lime. He speaks of the use of an extremely fine silk screen for bolting the product. There are few of these in use to-day. They have been replaced by air separators, and very wisely so. He makes the statement that it is found by analysis, that the hydrate produced from dolomite lime contains only enough water to satisfy the calcium oxide present, which would indicate almost conclusively that the magnesium oxide remains unchanged, and what we really have is the mixture of calcium hydrate and magnesium oxide. A reference to the matter which has preceded this will show conclusively that this is not the case, for the process which Mr. Brigham has been examining, this is not far from the truth since the percentage for the completion of the hydration in this process is rather low. Further, our experience in an experimental way on work designed

purposely to prove whether a calcium lime or a magnesium lime would carry the most sand when both were slaked to a rick putty, we were unable to detect any difference in the amount of sand carried by the two different types. Even when mixed with as much as ten parts of sand to one of the lime, there appeared to be very little difference in the spreading quality of the two. If there was any difference, it was in favor of the high calcium lime. He states the amount of water which it is required to add to 100 pounds of quick-lime for complete hydration as 55 pounds. This is approximately what is added in practice, but the statement is misleading. Notice that the complete hydration of 100 pounds of chemically pure calcium oxide would take up but 32.14 pounds of water, in chemical reunion, because for every molecule of calcium oxide which weighs 56 units, one molecule of water weighing 18 units will unite to form the hydrate, weighing 74 units. Forming this into a proportion, we have 56 : 18 :: 100 : (x) equals 32.15. (x) equals the amount of water which 100 pounds of lime will take up. However, owing to the high heat value of the chemical reaction between lime and water, it is necessary to add considerably more than this where slaking is carried out in the open, in order to take care of the amount lost by evaporation. Therefore, as has been previously stated, from 55 to 60 pounds of water will be necessary in practice for every hundred pounds of lime for slaking in an open vessel. A chemically pure dolomite lime with approximate composition of 56 per cent. (CaO) calcium oxide and 44 per cent. (MgO) magnesium oxide, would combine with 37.8 pounds of water per hundred pounds of the lime, for complete hydration. 100 pounds of dolomite with the above composition would have approximately 56 pounds of calcium oxide to be hydrated, and 44 pounds of magnesium oxide. Then we would have the proportion of the calcium oxide the same as above, 56 : 18 :: 56 : (x) equals 18. Since a molecule of magnesium oxide only weighs 40 units and each molecule of mortar will combine with one molecule of moisture to form the hydrate, we have the proportion for this part of the dolomite lime, 40 : 18 :: 44 : (x) equals 19.8 pounds. This makes a total for the one hundred pounds of lime of 37.8 pounds. Coming back to a high calcium lime with 97 per cent. calcium oxide, it is safe to presume that the balance of the material would not be susceptible to hydration. This would give us such lime that would only require 97 per cent. of the theoretical water necessary for complete hydration, i. e. 31.1. Therefore, if the lime were completely hydrated and no more, the yield would be 131 pounds. As a general thing, not more than 95 per cent. of the lime will be susceptible to hydration. On this basis, we would only expect to get 130.5 of perfectly dry hydrate. However, we believe that it is entirely possible that the product may be perfectly dry and still carry as much as 2 per cent. of hygroscopic moisture, which in an analysis would likely be entered with the combined water. Considering dolomite lime on the same basis, the amount of water which would combine would be close to 36.9 pounds, making the yield 136.9 pounds, provided the entire product had been hydrated. In case the calcium oxide only would hydrate and the magnesium oxide remain unaffected, the yield would be only 118 pounds. It is evident from results obtained in practice aside from chemical examination that at least a portion of magnesia must in some cases be hydrated during the treatment, since the presence of as much as 10 pounds of water added to 120 pounds of dry hydrate would show itself in such a way that there could be no mistake about its carrying mechanical water. As has been previously indicated, the results of tensile strength tests which are very low, especially on such material as this, are very unsatisfactory. Aside from this, the results given are hardly comparable for two reasons: one reason is that no details are given as to how they were obtained, whether it was a material mixed up neat with water, or whether sand had been added to make them mortars. Another reason is that only two of them, namely rich quick-lime and air-slaked lime are tested at the same time interval. These results however, are suggestive and indicate the advisability of more extended experimental work along this line in order to demonstrate to the public the true merits of either the dry process or the old time-honored wet one. While hydrated lime has been used in conjunction with calcined gypsum for some time, and with very satisfactory results, hydrated lime mixed with Portland cement is only in its infancy. There is no technical reason why thoroughly hydrated lime and Portland cements should

not be used, and a good mortar produced at a slightly lower cost than a mixture made with the same quantity of pure Portland cement, which would of course develop greater strength. There is also nothing to hinder the dry mixing of lime, Portland cement and hair, ready for immediate use, or if desired, the sand could also be incorporated by mechanical mixers. This would place this product on the same basis as manufactured or hard wall plaster. It should develop sufficient strength to harden, if enough lime and cement are used, but with the average Portland cement on the market to-day, the color of the wall would hardly be a pure white. The data furnished by Mr. Brigham is rather unusual in the light of the results obtained for the Chas. Warner Co., mentioned above. However, this difference might be accounted for in two ways, since no results are given showing that the cement has been properly tested, as should have been done for any such work as this. The statement is made "that it was one of the best Portland cements and may be counted upon as reliable." On the other hand, it is entirely possible that there was a difference in degree of hydration in the limes used by the different experimenters, since they were working at widely different points. But in case there was any hydration after the initial set, there would be sure to be trouble. While Mr. Charles Warner suggests that the physical condition of the two lime stones might be the cause of the different results obtained, we do not think this to be the case, since the physical condition, if anything, is more favorable to the complete slaking of the Western lime rather than the Eastern lime. It is very probable that the degree of hydration was the main factor in causing Mr. Brigham's tensile strength tests to decrease with age, rather than to increase. The treatment of the material during the first twenty-eight days would have a very decided influence upon ultimate results obtained, and there is no data at hand to show that this was parallel in both cases.

If there is any other information on this subject in the hands of our readers which is of definite character, we would be glad to see it get out. The development of this use of hydrated lime and Portland cement would mean almost a new market for both industries, and in some cases it would replace Portland cement mortar, in others it would replace ordinary lime mortar, and in others it would be used instead of the prepared, or hard wall plaster for interior work.

### Easy and Quick to Slake.

GOVERNEUR, N. Y., April 25.—The Gouverneur Marble Lime Manufacturing Co., makes their lime from the purest lime rock in the county, and it is especially adapted for hard wall plaster being extremely white and contains 93 per cent. of carbonate of lime, and is also easy and quick to slake. The kilns are located one mile from the city with a track for loading cars close at hand.

C. J. MAXINER.

### Depending on the Weather.

FOND DU LAC, WIS., April 23.—Building material moves slowly in Wisconsin this spring the falling off for March and April being probably 25 per cent. as compared with last year. This is due not to a lessened demand for building material, but to the abnormally late season. Building operations have not been begun in the smaller towns because of the cold, wet weather throughout March and April. The prospect is good when the weather gets right. STANDARD LIME & STONE CO.

BY W. A. TITUS.

The Sheboygan Lime and Stone Works, of Sheboygan, Wis., report business as picking up very materially and they anticipate an excellent trade as soon as spring opens up.

The Swanton Lime Works, of Swanton Junction, Vt., have begun putting up finely crushed, fresh burned lime in waterproof paper-sacks, made for them by Messrs. F. W. Bird & Son, the well-known manufacturers of water-proof papers. Experiment has shown that lime so put up will keep without slaking much longer than in the ordinary lime barrels. There is also a saving in expense.

The Persell Lime Quarry, Helena, Mont., is now producing 125 tons of stone each day. The stone is being used at the East Helena smelters. Fifteen men are being employed at the quarry at present, and the stone is loaded directly from the crusher into the car.

## GREAT PLANT DESCRIBED.

## The Largest Lime Plant in the New England States.

ROCKLAND, ME., April 26.—The Rockland-Rockport Lime Co. stands by itself in many features. It is the only large lime producing plant in the New England States; its quarries are different from the average; the physical character is different from the ordinary; the average lime manufacturer would find no stone in this country that he would think could make good lime, yet it is here. The kiln arrangement and equipment is different from any thing in the West. The management and the accounting system is probably one of the best and simplest in existence to-day in any lime corporation.

A large proportion of the water frontage at Rockland, Rockport and Camden is owned by this company, and practically all the lime kilns and quarries in Maine.

## Magnificent Equipment.

They own their own wood land; their own saw mills, equipped with modern machinery for stave manufacture and have three cooper shops to make their barrels at convenient points.

The limestone and lime is handled on land by their own railroad which has thirteen miles of trackage and three engines and 500 cars, with connections to Maine Central tracks, and to the electric lines of the county, as well as to three minor electric lines which handle products and raw material about the plants. The railroad is known as the Limerock Railroad.

## Capacity and Transportation.

There are eighty kilns in the combined plants, with a capacity of 3,000,000 barrels of 200 pounds each, annually, and a hydrating plant with a capacity of 2,500 tons annually, beside the large plaster plant on Greenwood Avenue, Brooklyn, New York.

The products manufactured by this company are transported to New York, Boston and Philadelphia by six large steel barges, capable of carrying 15,000 barrels as a cargo, landed by their own sea-going tug. When these are found insufficient, schooners are chartered.

## The Natural Formation.

The quarries are all in one belt about ten miles long. This belt shows three croppings, each several miles long, one covering Thomaston and Rockland, one at Rockport and one at Camden. This belt furnishes many quarries at each crop. The bedding is almost vertical and the physical character resembles the Ohio water lime formation more than any other lime formation, but is more of a blue gray in color. This formation furnishes at some points a soft burning magnesian limestone, and with a comparative narrow break of barren stone a high calcium limestone a little darker in color. There is apparently much organic matter in both limestones found here, which burns out.

## Method of Operating.

Owing to the nature of the deposits here the quarries are long, narrow and deep trenches. Say 100 to 150 ft. wide by 200 to 300 ft. deep, and 200 to 1,000 ft. long or more. The rock is lifted by power derricks from the quarries and dropped into the railroad dump cars ready to be transported to the kilns. The tracks are elevated at the kilns, so these cars can dump into the top.

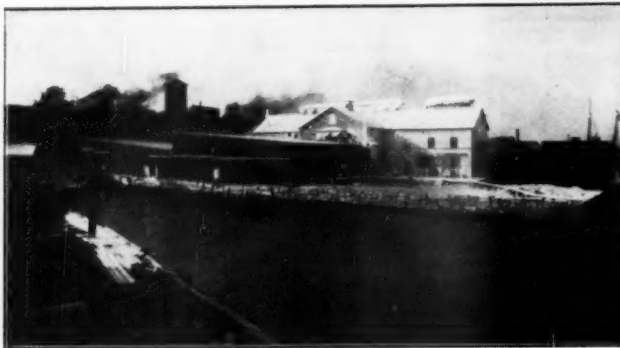
At intervals elevators are located so the lime can be run up and loaded into box cars for rail transportation. For every group of kilns there are dock facilities for water transportation.

At Rockland the kilns are in two long strings, some in batteries, some isolated. There are two producer plants, one at Rockland now idle, and one at Rockport. At some kilns wood is burned, and others burn coal with natural draft. At others gas producers are used. Therefore, in view of the effective accounting system of this company, it is probable they can furnish the lime people more authoritative data as to the comparative cost of different ways of burning than any other firm working to-day.

Over 1,000 men are employed most of the time.

## Superb Management.

The active management of this company is vested in a committee of three made up of F. E.



Hydrating plant, Rockland-Rockport Lime Co., Rockland, Me.



Interior Lime Kiln, Rockland-Rockport Lime Co., Rockland, Me.



Lime Quarry showing tramway, Rockland-Rockport Lime Co., Rockland, Me.



Rockport Quarry of Rockland-Rockport Lime Co., Rockland, Me.

Richards, Portland, Me., president; H. A. Buffum, Rockland, Me., assistant treasurer, and H. L. Shepherd, Rockport, Me., director. Mr. O. F. Perry, 1210 Fuller Building, New York, is in charge of New York business, and F. E. Holman is accountant at Rockland, Me.

The prospective Governor of Maine, Hon. W. T. Cobb, is a director in this company.

## "Looking Backward."

A careful review of the varied departments and interests represented by this company and their system of accounting, suggests very strongly to us the idea that this company could do a great deal toward educating the smaller manufacturer in the simple system of accounting which would show him at frequent intervals his actual cost of production were they disposed to do so. Such a move on their part would not only promote their own interest, but every one in the business by stimulating better prices, because when a man knows what a product costs he is going to get a profit or not sell. We trust that at the next meeting of the National Lime Manufacturers' Association, they will come forward with something along this line, as we know they are well prepared to do.

## Dry or Wet Slaking of Lime.

The question of the best way to produce a lime hydrate is not a new one, whether by the dry process, in which exactly the quantity of water is added, that a chemical analysis, shows the lime demands, or by the wet process, where the lime is drowned, the water being added in sufficient quantity to make a slum. Vitruvius, writing about 60 years B. C. describes a method of hydrating lime; that is, of slaking it so that it receives just the quantity of water for which it has affinity and remains, apparently, in a dry state. Vitruvius prescribed dipping lumps of quicklime in water, and there are people at the present day who follow this advice, with the result that they invariably get a granular character in their slaked lime, which gives evidence at once of its inferior quality. Such people conclude that a dry process is no good, instead of placing the blame where it should be, that is upon their own ignorance.

In consequence of this the hydrating of lime fell into disfavor, and the slaking to a paste, with a surplus of water, where it was supposed nothing could be spoiled, was held to be the only good and certain method.

## Hold on to Ancient Theory.

The opinion of users of lime is changing now. The investigations of industrial chemists and the improvements in machines and apparatus have made it possible to produce a slaked lime, in the condition of an impalpable powder, which is absolutely free from any particles that are unslaked or imperfectly slaked. A general opinion prevails that a fat, or white lime gives better re-



sults when treated with an excess of water, sufficient being added in slaking to form a slum. A rooted opinion of this kind is difficult to remove, although scientific investigation has proved that it is not well founded. The belief that dry slaked lime produced a mortar which had a very low strength and crushing resistance exists even in that part of Europe where the scientific investigation and treatment of materials have been carried to a greater extent than anywhere else.

#### Interesting Comparative Tests.

To combat this view the celebrated laboratory of Prof. Seger and E. Cramer, Berlin, Germany, made some comparative tests. As a white lime does not harden rapidly in air, the sand-lime brick process was made use of, and the trial pieces were hardened, like the sand-lime brick itself, under the steam pressure. A high grade sample of marble lime was taken, and part of it hydrated with 60 per cent. of water, leaving it dry; the other part was slaked to a slum with 240 per cent. of water. Both samples are then analysed to find the contents of caustic lime, and two masses of material were prepared, for each 93 parts of Berlin building sand were taken and of the dry hydrated lime and the wet slaked or slum, as much as showed the presence of seven parts of caustic lime. The materials were very thoroughly mixed, the right quantities of water being added, then pressed into cubes for the crushing tests, and into the usual figure of 8 pieces for testing by pulling apart. The cubes were seven centimeters (2 3/4 in.) each way. The pressure used in making the cubes was 10 tons, and for the figure—8 pieces six and a quarter tons. All the pieces were put at the same time into the experimental hardening vessel used in the laboratory and subjected for eight hours to a steam pressure of ten atmospheres. These test pieces, made and hardened under exactly similar conditions, gave the following results:

#### Test Pieces Made With Wet-Slaked Lime.

Resistance to crushing, 154.4 per kilo sq. centimeter.

Resistance to rending, 13.5 per kilo sq. centimeter.

#### Test Pieces Made With Dry-Slaked Lime.

Resistance to crushing, 194.2 per kilo sq. centimeter.

Resistance to rending, 15.4 per kilo sq. centimeter.

The strength of the material prepared with dry hydrated lime is therefore greater than that made with the wet slaked.

#### The Practical Advantage.

To what a serious extent quicklime loses its valuable properties in transportation and storage is well known to every specialist. On the other hand dry hydrated lime does not suffer in the least if it is properly packed. This lime, at the building site can, without any difficulty, without any special apparatus, and without any particular place for it, be worked with sand into mortar. The process is of the simplest kind, the necessary quantity of sand is mixed with the lime, water is added and the mortar is then ready for use.

#### A German Lime Works.

At Limburg in Hesse-Nassau, not the one famous for its highly odoriferous cheese, one of our representatives paid a visit to the lime works belonging to Mr. John Schaefer and sends us a short description. The limestone quarry has a stripping, or top soil of about twelve feet depth. It consists of a yellowish brown loam, and is carried off on an inclined elevator. This has a length of 172 ft. and its incline is at an angle of 40 degrees. To run this elevator an 8 h. p. gasoline engine is used. Below the stripping, which in some places goes down deeply into the limestone, a thin layer of ironstone is met with, and beneath this is an immense deposit of limestone belonging to the Devonian formation. This is of a pale bluish gray color, it rings when struck and is remarkably pure—nearly every part of it consists of 99 per cent. calcium carbonate. It produces a perfect, white lime. Here and there are met with nodules of fine crystals of calc spar, which are sometimes colored brown by manganese, or have a thin coating of manganese on them. The limestone deposit is taken off in two faces. The first one is taken down to a depth of 50 ft., the second to a further depth of 32 ft.

#### How They Work the Rock.

The work of breaking down the rock is let on contract. The blast holes are drilled by hand and the blasting is done with black powder and with dynamite. For hoisting the limestone out of the quarry a hoist is used that is run by a 3 h. p. gas-

oline engine. This engine also does the pumping of the quarry. It has been running continuously for three years and has given fullest satisfaction. The broken limestone is loaded into dumping cars that run on a small track. The dump cars go to the kilns, or at the railroad platform. The quarry supplies, yearly, 4,500 double carloads of broken limestone, some of which is exported in its natural state.

#### Admirable Kilns With Perfect Draft.

Two ten-chamber continuous kilns, by Jacob Buehrer of Constanz, are used here. In one of these twenty-two railroad carloads of lime are burned per week, in the other fourteen. The burning is done at from 1,200 to 1,400 degrees Centigrade (2,192 to 2,552 degrees Fahrenheit). The kilns work admirably, with a perfect draft all the time, and the special arrangements of dampers and system of controlling and clearing them give excellent results. The shrinkage of the lime in burning is about twenty inches. The fuel used is coal from the Ruhr district. This is wetted on top of the kiln so that the dust should not give any trouble to the burner. The two kilns are served by one stack, and we find here something worthy of notice.

#### Advantageous Arrangement of Flues.

Buehrer has arranged the flues from the two kilns in such manner that the smoke and fuel gases from the one enter the stack at the bottom, while the products of combustion from the other kiln enter the stack higher up, but these gases are carried in in such manner that they enter at a tangent to the gases from the first kiln. The result is that they rise in the stack with a swirling, spiral motion, for the purpose of carrying along with them the gases from the first kiln. It is found in practice that this object is accomplished and that there is a marked increase in the draft of the kilns.

#### Sorting and Loading.

The burned lime is loaded direct into railroad cars from the kilns. Regular-gauge tracks surround both kilns, and a switch communicates with the main line. There is a very close supervision of the products of the kilns, and careful sorting of the lime. Large pieces are not allowed to be sent out, but are broken to make sure that they are burned through. The lime is loaded into special, close fitting and well closed cars.

The Scioto Lime and Stone Co., Delaware, Ohio, has begun operations for the season.

The Builders Lime and Cement Co., Davenport, Iowa, have declared a 10 per cent. dividend payable May 1. This shows that the concern is upon a paying basis. Additional tools were authorized to be purchased.

The Granite City (Mo.) Cement and Lime Co. has reduced its capital stock from \$20,000.00 to \$8,000.00.

The New York Lime Co.'s large addition to its Carthage plant is rapidly assuming its frame work. It will be several feet higher than the present tower.

Robert Tillman, Gillett, Wis., is rebuilding his lime kiln, and will soon have it ready for the season's business, with all the latest patent improvements for the production of high-grade lime.

The Cleveland Artificial Lime Co., Cleveland, Ohio, has been incorporated with a capital stock of \$10,000.00.

The Woodville (Ohio) White Lime Co.—We are enlarging our plant and capacity to the extent of six new kilns, a new engine house and a steam engine and boiler, doing away with our gasoline engine and getting over twice the power.

Will have the new capacity completed in from thirty to sixty days and will then be able to put out from four to five cars of hydrated lime per day, besides ground lime, fertilizer lime and other products.

The increased demands for "White Enamel Finish" has driven us to this course and we anticipate a better year than we had last, but hope to be able to take care of the trade, which we could not do last season, having to turn many orders down on account of not being able to ship within two months.

This increased output will make us the largest hydrating plant in the United States.

Our new engine house is very nice, being made of hollow, rock face building block, which adds to the appearance of the plant a great deal, and as soon as we get a new coat of paint on the whole thing, we will be pretty swell.

#### BUILDING PROJECTS.

The contract for a \$300,000.00 armory to be erected at Rochester, N. Y., will not be let until early next spring.

Mr. Lesley Cheek, of Nashville, Tenn., will build a \$15,000.00 residence in that city of brick with cut stone trimmings.

A handsome office building will be erected this summer at Elmira, N. Y., by Messrs. H. M. Arnot, Ray Tompkins and John Brand.

The Montgomery County Court at Clarksville, Tenn., will entertain a proposition for the erection of a new jail at its July term.

Maury County, Tenn., has appropriated \$85,000.00, for the purpose of erecting a new courthouse at the county seat, Columbia.

The City Treasurer of Providence, R. I., has been authorized to borrow \$225,000.00, for the purpose of erecting four new school buildings.

The United States Government has acquired a site necessary for the erection of a \$200,000.00 Federal building to be erected at Macon, Ga.

Mrs. S. M. Winchester, of Chattanooga, Tenn., will erect a \$10,000.00 residence at Gadsden, Ala. The plans and specifications are about ready.

\$70,000.00 has been appropriated for the erection of a State armory at Flushing, N. Y. The matter is in the hands of the State armory commission.

Plans are in course of preparation for a two-story brick and stone armory to be erected at Peoria, Ill. Dr. Simmoneau is pushing the enterprise.

The Board of Education of Birmingham, Ala., is providing \$200,000.00 for the purpose of erecting a new high school building during the present year.

C. F. Hammond, architect, of Cleveland, Ohio, has about completed the plans for the new Zanesville, Ohio, Federal building. It is estimated to cost \$90,000.00.

The Odd Fellows and Knights of Pythias at Bessemer, Ala., will erect a joint temple to be constructed of brick with stone trimmings. Funds are already provided and plans are being drawn.

William J. Taylor will erect a studio building on W. 67th Street, New York City, at a cost of \$285,000.00. B. H. Simonson and Pollard and Steinman are architects.

John T. Dismukes and J. E. Ingraham, prominent financiers of St. Augustine, Fla., are arranging a proposition with the County Commissioners for the purpose of erecting a courthouse in that city.

Syracuse, N. Y., is to have a Chamber of Commerce building. Plans are already in the hands of the architect, President Francis E. Bacon having given a brief outline of the sort of building which is wanted.

The Touro Infirmary and Hebrew Benevolent Association, at New Orleans, La., are providing funds for the erection of a \$250,000.00 fire-proof modern hospital to be erected next year on the present site of their institution. Samuel Blum has been elected president of the association.

The Supervising Architect has again asked for bids on the Anniston, Ala., Federal building which is to be used jointly for a postoffice and for holding the United States Court. The appropriation has been increased by the last Congress to \$150,000.00. Bids will be opened in Washington May 17, at 3 p. m.

New York City will have two hotel buildings going up this season, plans having been filed with the building department. One of twelve stories on 28th Street, by Charles F. Rogers, to cost \$980,000.00, the other of nine stories at Gramercy Park and 21st Street, by Charles Bueke, to cost \$210,000.00. The architect is C. Brendon.

Pomona Lime, Cement and Rock Co., Spadia, Cal., report that they have been a year getting in machinery for burning lime and getting their plant in operation. They recently opened up a fine body of limestone, and in doing so found a very large body of the best cement deposit in that section. The body is only thirty miles from the city, with a railroad running directly through the property. They started up their machinery on April 1.

## Salt.

### Russian Supply of Salt.

There is no danger that the Russian army will suffer from the lack of salt. While the Russians may be compelled to import many other food products, this is one article that she produces in abundance.

In 1880 an imperial ukase abolished the excise duty on salt and the product of 700,000 tons annually at that time has nearly doubled.

In addition to the well known salt mines in Crimea, there is a deposit of salt of great extent in the Bakhmut district, in the Donetz basin, from which are taken annually more than 300,000 tons. At Slaviansk, which is in the neighborhood of Bakhmut, are wells of brine from which are evaporated upward of 100,000 tons yearly. In Northern Caucasus salt is produced from small lakes. There are lakes also in the government of Baku, which is near the Caspian Sea. In the Erivan government, southeast of the Black Sea, and in the Karsk region rock salt is obtained from large beds, which follow along the Russo-Turkish-Persian frontier for nearly four hundred miles. In some places these beds have an area of one square mile and are 280 feet thick.

#### Beyond the Volga.

There is an extensive salt basin in the trans-Volga steppes, in the Province of Astrakhan, comprising two of the largest known salt lakes, Elton and Baskunchak, a whole group of the so-called South Astrakhan salt lakes, and large beds of rock salt in the Chapchachi Hill. The Elton lake is one of the richest salt lakes known to exist, and covers an area of 135 square miles. The thickness of the salt bed is unknown.

#### In Siberia.

In Siberia salt is produced in relatively small quantities, principally owing to the distance of the salt bearing regions from markets and the absence of suitable means of transportation.

#### The Black Sea District.

The great salt fields of Solinen, near the Black Sea, are perhaps as picturesque as any of the salt works in Russia. Here the salt is evaporated from the brine by the sun in long and wide rectangular basins laid out upon the ground. A bird's-eye view of these fields after the moisture has been absorbed, leaving the salt lying in a thin layer on the bottom of these basins, is that of a series of fields covered with a light coat of snow. Surrounding it, gleaming in the sun, are stacks of this white snow, shaped like piles of old round, solid shot.

At the stacks women are to be seen assisting in forming the piles. It is a picturesque spectacle, but one whose elementary methods of operation shows that still in Russia human life is cheaper than modern time saving and labor saving devices.

### A Rich Man Rolls Salt.

Chicago strikers failed to stop the unloading of salt from vessels at the International Salt Co.'s docks in that city. Mr. Mark Morton, treasurer of the company, took a hand with the non-union gang of barrel rollers. Although a capitalist, Mr. Morton has done hard work in the past, and this exploit shows that he is in training to begin at the bottom of the ladder again if necessary. No workman is stronger than the big capitalist, and none handled the heavy barrels of salt with greater ease. He set the force a hotter pace than they were accustomed to, and he will keep up this work until the green hands get familiar with their jobs. Mr. Morton said, while he rested from his labors, "Some of the men who have been with us for several years, thought no one else could roll a barrel of salt. They talked strike and got the other men to go out with them. We have all the men we need at this time."

### Output of Salt Increasing.

For a number of years the United States has led the world in the production of salt. Recent figures upon the subject show that we produce about 25 per cent. of the world's supply, followed by Great Britain, Germany and France in the order named. The world's total production in 1903 was 12,000,000 short tons. Our imports come chiefly from Great Britain, and what little we export goes to Canada, or by the way of San Francisco to the Islands of the Pacific and South America. Our annual production of salt now exceeds 20,000,000 barrels, which is four times as much as twenty years ago. Of this total more than 2,000,000 barrels is table and dairy salt, and a little over 7,000,000 barrels common fine salt.

Four States produce the greater bulk of American salt; namely, Michigan and New York, each producing about 7,000,000 barrels annually, with Kansas and Ohio next in line, producing 2,000,000 and 1,000,000 respectively; California, Utah and West Virginia furnishing the smaller amounts. The entire output of all the other States is comparatively small.

The Worcester Salt Co., Silver Springs, N. Y., shipped a train of fifty cars lately, consigned to New England points.

A crew of men boring for oil at Hutchinson, Kan., have struck salt at a depth of 600 feet. It is not known, however, how much of a vein there is.

The Pomeroy Salt Association has been incorporated at Pomeroy, Ohio, with a capital of \$15,000.00 by Rose L. Clifton, A. R. Jesse and P. L. Clifton, Val P. Collins, G. Hartwig and W. M. Hubbell.

The State University of Redwood, Cal., will treat as a special subject the making of salt and the reclaiming of the salt marsh lands of that State. Men of practical experience along these lines have the matter in hand.

The Empire Salt Co., LeRoy, N. Y., have received a large contract from the Government to supply table salt for the Navy. The company has prepared a very elaborate display now on exhibition at the Buffalo Pure Foods Exhibit. The same exhibit will be forwarded to the St. Louis Fair.

The properties of the National Salt Co., consisting of fifteen pieces of land in the various parts of the State of New York, are being offered for sale by order of the court at the office of the receiver, 115 South Cayuga Street, Ithaca, N. Y. A former sale has been set aside by the Court as being fraudulent.

The rival salt manufacturers of Ohio and Michigan have gotten together at the Hollenden Hotel in Cleveland, Ohio, and adjusted their differences, buried the hatchet, smoked the pipe of peace, and adjourned in peace and harmony, after resolving never to cut the price again. All the prominent manufacturers of the district were represented.

Norman D. Bell, under whose direction the Pennsylvania Salt Co., at its Wyandotte, Mich., plant, has spent about \$1,000,000.00 in improvements, has finished his share of the work and will be succeeded by Mr. Dubois as general manager. The contracts for buildings aggregate \$1,500,000.00 and will be let soon. The plant will ultimately cover 130 acres, representing an investment of \$8,000,000.00.

### Rumored Consolidation.

A very brisk trade is reported from the Seneca Lake salt field at Watkins, N. Y. An unusual large tonnage will be shipped via lake and canal the coming season. Considerable interest is aroused over the rumored consolidation of two of the Watkins plants, the details of which are reported to be under consideration. The properties of the two companies, The Watkins Salt Co. and Union Salt Co., adjoin and extend across the head of the lake; this together with the fact that the former is a fine salt, and the latter largely a coarse salt plant, make them natural allies, thus causing the rumor to appear as though based on fact, although no official confirmation can as yet be obtained.

Write ROCK PRODUCTS advertisers when in want of machinery or supplies.

## Asphalt.

The American Asphalt Mastic Co., Lansing, Mich., has been incorporated with a capital stock of \$115,000.00. Wm. H. Worswick is one of the principal stockholders.

Henry Tatnall, receiver of the National Asphalt Co., has filed his final report at Trenton, N. Y. The report dwells principally upon the recent assessment levied on the former stockholders of the Asphalt Co. of America stock made to cover a deficiency of \$23,953,680.00. Mr. Tatnall declares that the stockholders of the Asphalt Co. of America are not liable to assessment because their company was not a falling one when the transfer of stock was made of the National Asphalt Co.

The plant of Warren-Scharff Asphalt Paving Co., at Muncie, Ind., has been absorbed by the Barber Asphalt Co.

L. L. Gillespie & Co., Jones Point, N. Y., are erecting a tank building 20x24 ft. for the refining of asphalt.

As a result of a meeting of the executive officers of the Warner-Quinlan Co., held in Philadelphia, Pa., recently suit will probably be instituted in the United States District Court asking for the annulment of the concessions granted the Bermudez Asphalt Co., by President Castro, Venezuela, on the grounds that they were obtained by bribery. It is known that cabled and written reports confirmed the newspaper dispatches, and President Castro in a State document, has accused the Trust of offering him bribes to the amount of \$500,000.00, and after he had refused, with having spent at least \$200,000.00 in aiding the rebels in the Matos trouble.

The oil and refinery interests of California are endeavoring to have the general paving specifications of San Francisco so changed as to permit the use of California refined asphalt in original work. Refined asphalt is permitted now only in resurfacing, and it is claimed that it is equally valuable for new construction.

The Barber Asphalt Co. will enlarge its plant at Des Moines, Iowa, with the erection of a couple of additional kilns.

There is said to be a bitter fight on among the stockholders for the control of the Federal Asphalt Co. The company has large holdings of asphalt rock land in Kentucky. It is now working on contracts in Seymour, Belvidere and Elgin in Illinois.

### For Sale—Asphalt Lands in Indian Territory

The Tishomingo (Indian Territory) folio, which the United States Geological Survey has now ready for distribution, will be of interest to people seeking investment in asphalt deposits. Of the 7,239 acres of asphalt lands segregated from the possessions of the Choctaw and Chickasaw nations and destined for sale at public auction less than a year hence, about 2,161 acres lie in the Tishomingo quadrangle.

It will be remembered that the United States made a treaty with the Choctaw and Chickasaw tribes on March 21, 1902, in accordance with which all deposits of coal and asphalt on their land were to be sold at the expiration of two years after the final ratification of the treaty. In the interval, the Secretary of the Interior was to ascertain what lands were principally valuable because of their deposits of coal or asphalt and to segregate and reserve them from allotment. In accordance with this provision, Mr. Joseph A. Taff, of the United States Geological Survey, was appointed to examine the lands and segregate those distinguished for their coal or asphalt deposits. Over 437,734 acres of coal land were segregated and 7,239 acres of asphalt land.

Mr. Taff is the author of the Tishomingo folio. As asphalt is the only mineral product of the quadrangle that has been developed to any considerable extent, he has naturally laid special stress on the descriptions of its occurrence.



# Granite.

## MAINE GRANITE FIELD.

ROCKLAND, ME., April 22.—Calling at the offices of the great Bodwell Granite Co., your representative found as congenial a companion in the person of the secretary and treasurer, Mr. E. H. Lawry, as any Kentucky colonel he has ever met; that is, of course, after Mr. Lawry had first given him a rather cool reception. This company owns and operates twelve quarries at Fox Island, one at St. George and one red quarry at Jonesboro with immense power polishing works at Vinalhaven. Geo. M. Brainerd is the president, F. S. Walls is vice president and Mr. E. H. Lawry, secretary and treasurer, as before stated.

### Early Development.

Operations at Vinalhaven by Bodwell, Webster & Co., commenced in the latter 50's or early 60's. Cobb, Wight & Case commenced at Sprucehead in the 60's. The Bodwell Granite Co. was incorporated in 1871 and the officers at that time were: Gov. J. R. Bodwell, president; Moses Webster, vice president; Francis Cobb, treasurer; E. H. Lawry, secretary. They are famous for getting out and polishing immense columns six feet in diameter by sixty feet long, catering almost entirely to building work, and having immense facilities, both at the quarry and in the shop for turning out such work rapidly.

### Undertake the Largest Contracts.

They are well known to Government building contractors and architects, and are now working on the new custom house building for New York. The Government and railroad buildings for which they have furnished the material, are too numerous to mention in full, but I will say they furnished the granite for the new postoffice building and new State, War and Navy buildings at Washington, D. C.

### How a Lighthouse is Constructed.

An interesting piece of work they now have on hand is a light house, which is to stand 70 feet high, 28 feet in diameter at the bottom and 20 feet in diameter at the top. There are four floors in this lighthouse near the top of rock 24 feet in diameter. According to the specifications this work must be set up in perpendicular 16 ft. sections in the yard, and inspected by the Government engineer before shipment to its destination. Of course this double handling costs the Government considerably extra money, but it is deemed necessary in such cases.

### Where the Polishing is Done.

Mr. E. F. Russell, at the Vinalhaven plant of the Bodwell Granite Co. is an example of the company's wise selection of a general superintendent. The town is one of the prettiest in New England, showing thrift on every side. The great granite company owns the largest general store in the village, yet there is plenty of opportunity to deal elsewhere.

Other quarries are operated on territory on Fox Island adjacent to Vinalhaven, by Block & Law, Webster & Chalico and James Armbrust.

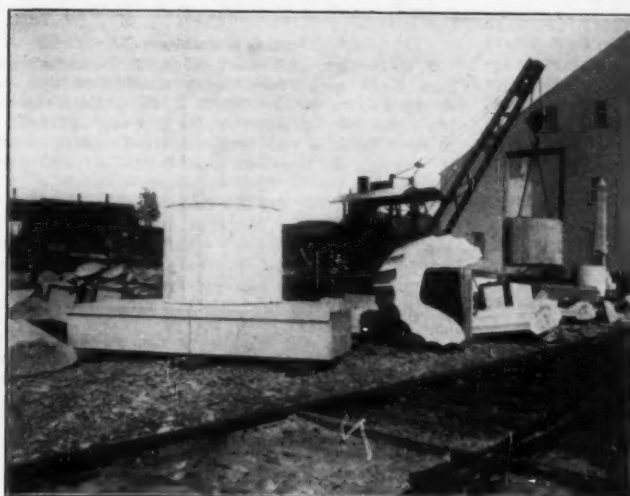
### BOOTH BROS. AND HURRICANE ISLE GRANITE CO.

Booth Bros. and Hurricane Isle Granite Co. is a corporation organized in 1889, taking the business that was formerly carried on by the Booth Brothers at their quarry at Long Cove, in the town of St. George, Maine, and also at Millstone Point, Conn., and the business of Gen. Davis Tillson, who opened and operated the quarries at Hurricane Island, Maine.

This company now operates the quarry at Hurricane Island, a quarry at Long Cove, a quarry opened by them at Waldoboro, Maine, in 1897, together with their quarry at Waterford, Conn.

### A Little Historical.

The quarry located at Hurricane Island was opened in 1870 by General Davis Tillson. The first important work done there was getting out



Columns which went into Frick Building. Cut at Vinalhaven, Me. Plant of Bodwell Granite Co., Rockland, Me.



Granite work of the new New York Custom House in the shed at Hurricane Isle, Me. Quarries of Booth Bros. & Hurricane Isle Granite Co.



Yard and portion of plant of Bodwell Granite Co., Rockland, Me. (Vinalhaven plant).



Booth Bros. & Hurricane Isle Granite Co. Shipping place at Long Cove Quarry, St. George, Me.

granite for the custom house and post office at St. Louis, which involved the leasing of the property by the United States Government and the expenditure of \$5,000,000.00 for cutting the granite for that building. This quarry all through its history has been busily occupied, employing from 250 to 1,000 people since 1873. It has within the last three years been equipped with everything in the way of modern appliances for both the quarrying and dressing of granite.

### Splendid Equipment.

It is equipped with derricks of the latest pattern, and operates two locomotive cranes about the shops and yards for the handling of the quarried and finished stone; it has a very expensive air plant, developing 1,100 feet of air per minute, for power for the drills in the quarry and the pneumatic tools in the sheds for dressing the granite. The most important piece of work now going on there is a part of the granite for the new custom house being built in New York City, of which Cass Gilbert is the architect. This building will be the finest and most elaborate design of any building yet constructed by the United States Government.

### Waldoboro Plant.

The quarry at Waldoboro has been very actively in operation since its purchase by this company. The first important work there was the Buffalo Savings Bank. Subsequent to this was the cut granite for the Fidelity Trust and Safe Deposit Co., of Buffalo. Since 1900, this quarry has been engaged in the quarrying and dressing of the granite for the new buildings at the Naval Academy at Annapolis, Maryland; employing an average crew of 300 men and involving an expenditure of \$1,400,000.00 for the granite work. This quarry and plant are equipped with all modern appliances for the quarrying and handling of granite.

### Largest Paving Block Quarry.

The quarry of this company at Long Cove is devoted very largely to the production of granite paving blocks. These quarries were operated by the Booth Bros. as early as 1876. The production of granite paving blocks at this quarry is larger than any other one quarry in the United States. Last year the production was over two and one-half million blocks, which were shipped by vessels to New York and Philadelphia.

### The Highest Priced Granite.

The quarry at Waterford, Conn., is located about four miles from New London and produces a fine white granite similar to the granite found at Westerly, R. I. It is used almost entirely for cemetery work, fine monuments and mausoleums. Very little building work is done there because of the high cost of the granite itself, which brings the highest price in the market of any of the granites used for monumental purposes. At this quarry there are employed about seventy-five cutters.

**Delightful Man to Meet.**

This company is one of the most wide-awake corporations in the East, and Manager W. S. White has been wisely chosen to take charge of their extensive business, since you only need to meet him once, in order to feel that he is a good fellow, ready to listen to what you have to say, and ready to promptly give you a reply, and save your time and his both. He is not the horse swapping type of the East by any means.

He is a man that both East and West admire, a



John L. Goss Granite Co., Stonington, Me. (Crotch Island)

gentleman, a clear cut business man, and a factor in State and National politics.

Clever Tom Sullivan is superintendent at Hurricane Isle, Me.

The illustrations will show the class of work being turned out by this company.

**STONINGTON GOSSIP.**

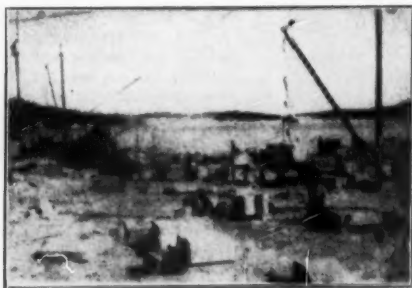
STONINGTON, ME. (on—Deer Island), April 23.—This is a lively little place, but a cold proposition on a stormy spring day. Should you be so unfortunate as we were in landing, just holler for Wm. H. Goss, and we know he will do his best to make you comfortable. Mr. Goss has charge of the Moose Island end of the John L. Goss granite interests on Deer Island. This company has two quarries on Crotch Isle which have been in operation about thirty-three years, known first as the Jobe G. Goss quarry and the Jobe G. Goss, Jr., quarry, and for the last nine years as the John L. Goss Granite Co.

The Moose Island quarry and granite cutting sheds were opened by John L. Goss Granite Co., of 221 Columbus Ave., Boston and Stonington, Me., about seven years ago. This company has been connected with much important work. They have air and pneumatic tools. Mr. Will H. Goss is an inventive genius with several patents, and has recently developed a machine which so far as we can see will save his company money in getting out their stone.

Casey & Sherwood are also operating on Crotch Island.

**Erecting New Shed.**

The Ryan & Parker Construction Co., of 13 Park Row, New York, under the able superintendence of J. C. Smith at Stonington, Me., have added to their equipment this spring a very large



John L. Goss Granite Co., Stonington, Me. (Moose Island)

shed, and have been hard at work cleaning out and improving the quarry formerly operated by Ryan & Parker, and previously known as the Goss & Small quarry.

The new shed is 151x60 ft. and 32 ft. high, equipped with a Lane Mfg. Co. (of Montpelier), traveling crane of twenty tons capacity. The derricks and tracks are so located that any derrick can feed to the sheds or to either dock at north or south end of quarry.

The quarry has a face 600 ft. long and is 40 ft. high, and 250 to 300 men will be employed the coming season.

They are at present working on the stone for the Riverside drive for the city of New York.

**Putting in Machinery.**

J. C. Rogers, with main office 328 Lenox Avenue, New York, owner and operator of what was formerly known as the M. G. Ryan & Co. property, has some very large contracts in hand and expects to soon build a new shed on the property 60x208 ft., putting in traveling cranes and air and pneumatic tools.

**The New Concern.**

One of the newer concerns operating at Stonington is Hogen & Wilcox, with the Stonington end in charge of G. H. Wilcox. This company has purchased the land and quarry formerly known as the old Ben Thurlow quarry, and are rushing a full equipment to the scene of activity as fast as possible, and will within twenty days be a producer. The Hogen end of the firm is John Hogen, of Hogen & Co., which has a large yard in Philadelphia and does considerable cut stone work contracting.

**PORTLAND, ME.**

PORTLAND, ME., April 26.—We called on Mr. Murphy, Superintendent of the Maine and New Hampshire Granite Co., which has quarries at North Jay, Me., and Redstone, N. H. Mr. Murphy was down



F. A. Drew and a piece of work cut by him. Milford, N. H.

in Massachusetts stirring up things a bit. We found, however, that the season had not opened up yet with them and things were not being crowded very hard at the quarry.

The Union Granite Co. have followed their usual custom this winter, and done very little work during the severe weather, but will soon be in full swing again.

Hawkes Bros. have been working more or less all winter and Mr. Hawkes expects a good summer's monumental business.

Manager Miller must have heard that we were coming, because he was off down town, when we arrived at the office of George W. Leighton & Co., 327 Stevens Avenue, although we found things very lively out there.

**HALLOWELL, ME.**

HALLOWELL, ME., April 26.—While the Hallowell Granite Co. has sheds and offices near the depot covering half a block they do not seem to be adequate since they are building another large one out at the quarry about two miles up the hill. These improvements have kept the president, Hon. Joseph H. Bodwell, and superintendent Joseph P. Hunt, on the jump this spring.

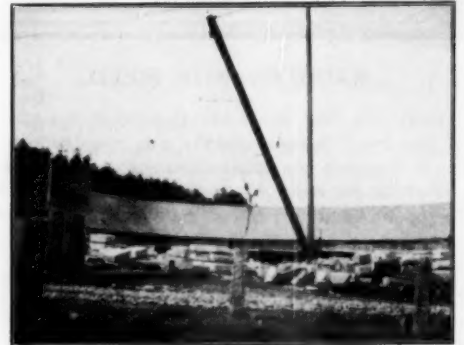
C. E. Tayntor Co. is also up and doing. Mr. Tayntor has just returned from the South to his New York office, 239 Broadway.

Mr. H. J. Carriek, superintendent for C. E. Tayntor at Hallowell, Me., has been down in New York during the last month to arrange for some improvements.

Prospects are good for the coming summer at Hallowell.

**MILFORD, N. H.**

MILFORD, N. H., April 25.—This is one of the liveliest granite centers in southern New Hampshire. A visit there will show activity on all sides, and if you take the trouble to call upon the managers of the sheds you will find a lot of lively



John Severens shed and office. Concord, N. H.

up-to-date fellows, and the quarries you will find are all favorably located for the production of stone at a low cost.

The Milford granite is very similar in texture and color to the Westerly grey granite, and it is an easy matter to substitute one for the other and fool those familiar with both.

One of the most promising young quarry concerns is Tonella & Sons, who are supplying a great deal of monumental stock as well as operating a shed themselves, and shipping rough stock.

The largest quarry concerns perhaps, are the Lovejoy Granite Co., and the Kittredge Quarry Co. Mr. E. G. Kittredge, of the latter company, is out on the road at the present time looking out for some new business. The product for this quarry, is used mainly for curbing and paving.

The Lovejoy Granite Co. have recently opened up a second quarry on the site of what was known as the Calvin Marrow Quarry. S. A. Lovejoy is in charge and says they look mainly after building work and bridge work, but produce quite a good deal of curbing and paving. These quarries are so located that an enormous amount of stone could be taken out in a very short time.

We failed to see Manager John Young, of Young Sons & Co.

Lovejoy, Kittredge & Young have railroad facilities.

The New Westerly Granite Co., John F. Pirovano, manager, have been making improvements on their quarry this winter and say that their entire output is taken by the cutters, that is, when they have any to spare from the demands made by their own sheds.



John Severens quarry. Concord, N. H.

A call upon Curtis George, of the Milford Granite Co., and a look around showed a shed full of nice work; this is the largest shed in Milford.

Murphy Bros. operating the Columbia Granite Co., believe in live up-to-date methods and original ideas, and I presume some of their original ideas have been effective because we saw a handsome piece of work just about finished, which is to go to some of the Pacific Islands.

Angelo Bernasconi, P. O. 91, Laurel, N. H., had his picture taken the other day; just ask him about it.





Thos. G. Lester plant, Portsmouth, N. H. Lester in picture

If you see F. A. Drew, Milford, also ask him whether he thinks he would look good in a frame.

We did not have much time for the Daniels Granite Co., but while there we found quite a complete polishing mill and a good sized shed and D. L. Daniels, whom all the boys say is a real good fellow, and that I must not leave Milford without seeing him. The Daniels mill does a good deal of polishing for those cutters who do not have a mill of their own.

### CONCORD, N. H.

CONCORD, N. H., April 25.—The hills adjacent to Concord have for many years supplied granite, and there are many Government and other buildings standing as a monument to its excellence. In 1863, the father of C. L. Rowe, who is still on these quarries, began opening what is known as the Granite Railway Co.'s quarry, which is now the property of John Swenson. If not the first quarry opened, it is among the first. It is said by some that the New England Granite Co. had a quarry opened prior to this. The Swenson quarry was opened in the early seventies. The Concord Granite Co., which is no longer in existence, was among the first to cut granite, and their quarry is now owned by the New England Granite Co., formerly known as the Rhode Island Granite Co.

Mr. J. H. Flood is probably the oldest man in the business; that is, he has cut granite longer in Concord than anyone cutting it, at this place. He says that he thinks that Luther Robey was the first to open a quarry. The first quarries that were opened did only a little local business; it was not until the Granite Railway Co. and the New England Granite Co. took hold of things that Concord granite became widely known and widely used. Among other "old timers" still at it are Patrick Crowley and Ola Anderson.

A visit to the majority of the sheds left us with the impression that John Swenson, West Concord, Thomas Fox, W. H. Perry and the New England Granite Co. represent the firms who have the largest cutting capacity. At the present time, the New England Granite Co.'s plant is idle.

#### A VISIT TO EACH OF THE PLANTS.

We found W. H. Perry so busy that he did not even have time to learn the object of our visit.

While Thomas Fox's sheds showed that there was plenty doing, Mr. Fox had time for a short visit with us. Mr. Fox probably feels that he can make more money by looking after his office than by trying to earn a man's wages in the sheds.

A call at the office of John Swenson brought out the fact that he had added quite a good deal of quarry property to his holdings during the last year, taking in the old Granite Railway Co.'s quarry, which he will improve materially during the next summer by quarrying a channel out one side on a level with the present quarry floor, so that teams may get in and out readily. This quarry is shown in the illustration as it appears in winter time, with about twenty feet of water in it. Mr. Swenson has operated his other quarry all winter, and probably puts less waste stone over the dump in proportion to the amount of stone he gets out than any other quarry in Concord. Everything that is not suitable for monumental and building work is cut for curbing or for paving block.

Mr. Swenson is also adding materially to his manufacturing equipment. He is putting in a 700

ft. Rand compressor, to be driven by a 100 KW motor. This assisted by his present compressor will furnish air for the tools in the shed and the drills in the quarry. A number of plug drills will be added to the quarry equipments.

For the benefit of any who have not seen the Concord stock, we will say that it is a medium grain stock, grey in color, ranging in depth between Barre light and Barre medium. Mr. Swenson, who has been in business here about twenty years will undoubtedly have an able successor some day, since his son Omar Swenson, bachelor of science, Massachusetts Institute of Technology, has gone into the sheds with a view of learning the business from the bottom up. When men of education and training learn the details and acquire the skill of the practical man, they certainly are very valuable.

Most of the men have been cutting all winter, at least whenever they were able to get stock. In talking with quite a number, we infer that there is frequently a shortage of desirable stock. This condition will probably be relieved when Mr. Swenson gets his second quarry going. Mr. Swenson is at present in Vicksburg, Miss., setting the New Hampshire soldiers' monument at that place.

F. R. Clark, West Concord, says all the conditions point to an average season this summer.

Mr. Henneberry, of Henneberry & Haligan, on Prospect Street, says while they are busy running a few gangs of men, he believes as we do, that the price on manufactured granite is too low for a reasonable profit.

Oliver Racine, 252 North State Street, takes the right view of it, he says: "I will take all the work that I can get at such a price as will give me a profit and allow me to do good work. If the work can not be placed at such prices, some one else may do it."

The Granite and Marble Employers' Association, of Montreal, Canada, at a recent meeting decided



Granite R'y. Co. quarry, Concord, N. H., recently purchased by John Swenson, and will be operated by him this year.

to uphold the principle of open shop. The strike situation which has existed at Montreal for several weeks is unchanged. Each man is invited to come to his employer and arrive at an individual understanding. The union strikers, however, say they will hold out until their terms are complied with.

The town of Bethel, Vt., is jubilant over the big contract awarded the E. B. Ellis Granite Co., of Northfield, Vt., for granite to build the new Union Station in Washington, D. C. The contract price for the granite was upwards of \$1,200,000.00. The demand for this beautiful white granite is growing constantly, and the company is receiving inquiries for estimates and samples from every part of the United States. The contract now in hand marks an epoch in the building industry of the United States, and is also of greatest importance to the industry of Vermont. The E. B. Ellis Granite Co., of Northfield, was formed in 1903 to promote the introduction of granite from the Bethel white granite quarries. The officers of this company are: Andrew E. Denny, president; E. B. Ellis, vice president; G. Starret, second vice president, and I. C. Ellis, treasurer.

The Hallowell Granite Works, Augusta, Me., expect to introduce surfacing machines at their quarry in order to increase their capacity.

Bangor, Me., advices indicate that the Red Beach Granite Co. has absorbed the Baring Dark Granite Co. and will operate the quarries.

### THE BARRE DISTRICT.

BARRE, Vt., April 26.—The sympathy of the trade goes out to the father and son who compose the firm of C. W. McMillan & Son over the death of Mrs. C. W. McMillan, which occurred April 23. She had been ill for several months with tuberculosis. The deceased was 55 years of age and was born in Aberdeen, Scotland. She was married to Mr. McMillan in 1872.

#### Large Building Contract.

It is expected that work will begin in a few days on another large shed which will be added to the present E. B. Ellis Granite Co. plant at Northfield. Central Vermont Railway officials visited the place a few days ago, and the location of the proposed new shed was agreed upon, which will be 450 feet long and its erection will necessitate the moving of a large cannery factory that stands in the way. About 500 additional cutters will be at work in Northfield before the warm weather is very far advanced. In addition to the mammoth building job that is being taken care of by the E. B. Ellis Co., it is rumored that Cross Bros. have seen the wisdom and the dollars that may be found in building work. If Cross Bros. do go into the building work there will be something doing.

Innis & Cruickshank are putting in a new 20-ton Blondin at the quarry. We shall expect to hear Alex tell the boys at the next national quarry owners meeting how well it pays to hustle and keep the improvements up to date.

I dropped in on Geo. Walker & Sons the other day and found young George mixing polishing dust and cuss words with a mighty effort to keep even with late Memorial Day orders when stock is delayed two or three days.

George Mutch, of Mutch & Colder, was pretty busy when I stepped into the office last week. He was engaged in the charming occupation of catching the central "Hello" girl at a time when she could not say: "The line is busy." He finally hung up the receiver with a look of resigned desperation, such as we all have felt when we have wanted to talk with anybody in a hurry over the telephone, and I learned from him not only that he likes Rock Products but that Mutch & Colder have just installed an American Air Compressor at their shed, and that the Manufacturers Quarry, of which Mr. Mutch is the manager, has completed the installation of a Sullivan air compressor.

Whitcomb Bros. are whacking away at the Rheinbolter building job at Bond & Whitcombs' quarry, and are putting in some extensive improvements there. They are to be the first quarry on the hill to install electric power, which is to be supplied from a new addition to the Consolidated Lighting Co. plant. Whitcomb Bros. have just put out from their machine manufacturing plant a new 30-ton derrick for the Barney Marble Co. at Roxbury, Vt. The latter quarries a deposit of variegated marble and more work is to be done there this summer than ever before.

Retail dealers who like Rock Products can help along a good thing by sending their orders to our advertisers. We don't take advertising from any but reliable firms.

#### Electric Power for Northfield.

Another evidence that Northfield is on a boom comes forward in the announcement that electric power to the amount of about 1,000 horse power is to be transmitted from the Mad River valley, where a new plant is to be erected. This will probably have considerable effect on the granite business, as well as the slate business in Northfield.



Angelo Bernasconi and a piece of work cut by him at Milford, N. H.

Leland Hall & Co., of New York, at their cutting plant in this city, are putting out one of the most beautiful crosses that ever went out of Barre. The cross itself stands thirteen feet high above the pedestal, and it is four feet wide from tip to tip. It is an antique design and both the base and the cross are elaborately carved from a full sized model, the latter having taken the sculptor's entire attention for a period of seven months. The monument is in the memory of the late Senator Sewall of New Jersey.

The North Barre Granite Co. has been putting out a good deal of work for Memorial Day jobs, but the boys feel happy that they have got pretty well caught up or will be by the time this issue is out.

Rizzi Bros. are cutting a Corinthian cap which has some carving on it that deserves a place in the Academy of Art.

Dan McLeod, of Emslie, McLeod & Co., was on deck as usual when I called on him the other day and was superintending the setting up of a splendid piece of monumental work that will attract a great deal of attention in the Barre exhibit at the World's Fair. The monument is of dark granite about 9 ft. 6 in. high. The first and second bases are all polished while the third has four polished panels set off by beautifully carved corners. The die, which is 3 ft. 10 in. high and 2 ft. 6 in. square is all polished. The plinth has four sides nicely carved and the cap is all polished. It is seldom that a piece of work shows up the beauties of Barre dark granite as this one does. The same firm is also carving a sarcophagus surmounted by a statue of Memory. The artist employed on the sculpture is a graduate of the Academy of Art in Milan, Italy, and is in the regular employ of the firm.

#### Will Move to Warmer Climes.

W. D. Kidder, for several years a well known granite manufacturer here, recently spent several months in Florida and Cuba. While sunning himself beneath the tropical foliage of that clime he read the Vermont weather reports that told of 50 degrees below zero and determined then and there to make a change. He is now about to sell his business here and will immediately establish himself in the lumber business at Tampa, Fla.

The Smith, Whitcomb, Cook Co., have put in one of the biggest polishing machines in town at the plant of Stephen & Gerrard.

Mathieson & McIver are getting things at their quarry well in hand for the summer business. They recently got out a mammoth block of granite that measured 10x20x12 ft. The new machinery they put in last fall is proving of great benefit to them.

A. Anderson & Sons are putting up a new Blonduin derrick and a 75 h. p. boiler and making other extensive improvements on their quarry. It is strange but true that this firm, like others, find that they can transport their stock from the quarry to the cutting plant cheaper by teams than they can by railroad.

Several of the busy granite manufacturers are finding time to exercise the jaw as well as the rest of the body. They have started a class in Italian which meets at the Manufacturers Club every Tuesday night under the direction of the Rev. Father Comi, of Montpelier.

The Smith, Whitcomb, Cook Co. have recently shipped a new polishing machine to J. C. Enright, who is to start things booming in Windsor, Vt.

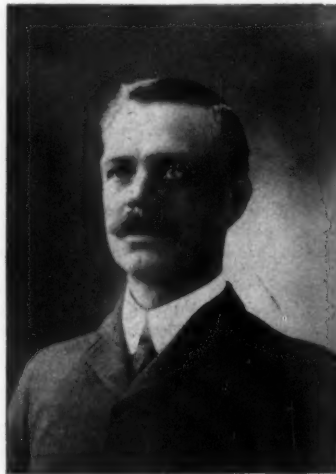
#### More New Sheds.

One of the evidences that the dull season is only temporary is seen in the commencement of work this month on a large new shed to be erected near the J. B. Rhinehalter plant by Guidici Bros., in company with the firm of Pellegate, Magnaghi & Galli. The building will be 206 ft. long and 60 ft. wide, and will be very handy to the railroad. The combination has purchased a plot of land three times the size to be covered by this proposed structure, and will be prepared for future enlargement. The plant will be ready for occupancy in about four months. It is to be supplied with a 20-ton traveling derrick, two polishing machines, a steam boiler for heating purposes, and in fact everything that goes with an up-to-date plant. They will use gas power.

Guidici Bros. began business here in 1899 with a small amount of capital, but have rapidly grown to the foremost rank. The other firm has enjoyed an experience similar to that of Guidici Bros., and like them have made a specialty of carving. Guidici Bros. recently secured a lease with the option of purchase on the Patten light quarry.

#### Monument to Pioneer.

The Harrison Granite Co. have just shipped to St. Louis a monument 34 feet across at the base in the form of an exedra. The monument proper rises from the middle to a height of 50 feet. This monument is to be erected by the admirers of the famous explorer, William Clark, whose name was placed on the honor roll of American history through his connection with the Lewis and Clark expedition, which split the great Northwest by a tide of civilization nearly a quarter of a century



Hon. N. D. Phelps, manager of Barre White Granite Co.

ago. They are putting out a similar monument of smaller dimensions to be set up in New York in memory of the late Emma Booth Tucker, of Salvation Army fame.

Captain Patrick J. Rogers has recently purchased the old established granite business of Noonan Bros. and is doing business under the firm name of the Rogers Granite Co. The firm of Noonan Bros. was established in 1892 and previous to that time had been known as Noonan & Nelson. Of late years the business has been conducted by William and Michael Noonan. The latter died some time ago and the surviving partner becoming interested in the hotel business Mr. Rogers saw his opportunity. The latter has worked at the trade for fifteen years and is all right. He served with the Vermont regiment in the Spanish-American war and is at present captain of Company E. V. N. 4.

#### Local Organization Needed.

Both the retailers and the manufacturers could wear more diamonds if the former would perfect



Vermont State House built from Barre White Granite sixty years ago.

the right kind of an organization to act in concord with the latter. It is safe to say that such an organization would receive the glad hand in Barre. Better prices from the market, a little more discouragement of this cutting prices that gives cheap work would make life easier for the producer and the dealer and would assure the trade of a more permanent market for the honest job.

Sam Oldham has been selling Oldham pneumatic tools in this vicinity during the past month.

Mayor Barclay, of Barclay Bros., reported business on the quiet but was feeling good over hav-

ing just received a good batch of orders from California.

Alex Milne, of Littlejohn & Milne, had just returned from a Western trip the other day when he received a dispatch calling him away to New York again. He was away when I called and Mr. Littlejohn was swinging things at the shed. The latter is just about to make himself comfortable in one of the most attractive new residences in the city.

Robins Bros. were shipping a splendid soldiers' monument to Woburn, Mass., when I called on them the latter part of the month. Alderman John Robins was busy with a good lot of work on hand and George was having a vacation at home as the result of having tried, a few days before, to make a drop kick with a few tons of granite. His foot was badly damaged but he will soon recover.

J. P. Corskie & Son showed your representative the finest bunch of roses carved on the side of a monument that has been seen in Barre in a long time. The principal job they have under the hammer at present is the Patterson monument, to be sent to Ohio. It stands 14 ft. high and this is to be surmounted by a statue of Faith 7 ft. 6 in. high. The four corners of the die are columned and carved and the two caps are likewise carved.

#### World's Fair Exhibit.

The Barre exhibit to the World's Fair at St. Louis has been passed upon by the committee at each one of the sheds where the work has been cut and the monuments have all been shipped over the Grand Trunk Line and the C. B. & Q. Mr. Copeland, traveling freight agent for the latter road, was the man who got the shipping contract. The specimens of monumental art and the kind of stock from which they are cut, will fairly represent the Barre industry. The Manufacturers' Association feels willing to let the exhibit speak for itself. It certainly will speak right out to those who pass by it at St. Louis. Of course more expensive jobs can be cut from Barre granite but for the ordinary grade in price it would be hard to beat this exhibit.

#### Summer Outing.

I found a general readiness this month among the boys to talk about the outing that is to come some time this summer, probably in July. A committee consisting of Mayor William Barclay, James Campbell and James Adie has been appointed to confer with the Quincy men to ascertain their pleasure before completing the plans. It is left with the latter to say whether they shall be entertained by the Barre men on Vermont soil or whether the Barre men shall meet the Quincy men near Boston and entertain them at some summer resort on the sea coast. In any event there is fun ahead for all from the moment that President Alexander and Secretary Campbell mount the engine cab until they are all safely at work in their own stone shed again.

#### Inventive Genius.

I wound my way in and out amongst the wheels and belts that adorn W. A. Lane's machine shop and came safely through to the farther end of it where I found Will busily planning some new discovery in the action of steel on stone. He is always getting out something new and I was not surprised to learn that he has just built a new fangled machine for grinding cutters on column cutting lathes. He has shipped one of them to the Bodwell Granite Co. at Vinal Haven. Another new device of his is a small polishing lathe suitable for use by retail dealers. He has sold four of these lately. He has recently shipped ten polishing machines and one polishing lathe to Montello, Wis., and machines to St. Louis, California and Brooklyn.

The first meeting of the creditors of Joseph Wood & Co., was held a few days ago and William Jack was elected trustee.

The civil case of George Oldham & Son vs. E. B. Ellis and the Northfield National Bank as trustee was settled and discontinued in county court.

H. G. Kotten, manufacturer of the Kotten pneumatic tool, was a welcome visitor in Barre last month. Mr. Kotten is getting out a new Baby rock drill. This is a pneumatic tool that will drill two-inch holes three and four feet deep. It is very easy to operate and is now being given a trial at the up-to-date quarry of E. L. Smith & Co.

Leonard R. Hutchinson, who, since the death of the late Col. H. R. Stoughton, has been acting local superintendent for the Central Vermont railroad, has been superseded by J. O. Adams, of Williamantic, Conn. No reason for the change was

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given. This action on the part of the powers that be was a great surprise to the granite men.

Barclay Bros. are to put in a 100 h. p. gas engine at their plant as soon as the new gas plant is in operation.

#### Improvements to be Built.

Several new office buildings, all with granite fronts, are to be erected in Barre this summer. He is of able and artistic mind who builds of Barre granite.

The city of Montpelier is to erect during the coming summer a suitable granite monument to the memory of the late Joel Foster, for a long time superintendent of water works in that city. Bids on the work are to be confined to the manufacturers who operate plants in that city.

Giovanni Fuchina, whose sons are connected with the North Barre Granite Co., is spending several months in town. He lives in Luvinetti, Italy, and was formerly mayor of that town.

James Ahren, the man who makes hammers and other hand tools for the granite trade, has recently improved his plant by installing a general electric motor and other improvements are to be made soon.

Mr. and Mrs. Harry J. Baldwin left last month for their home in Zanesville, Ohio. Mr. Baldwin is a member of the granite firm of C. S. Baldwin & Bro., of Zanesville, and has had charge of the branch office here for the past year. T. G. Moore of Zanesville, takes charge of the office here now, while Mr. Baldwin will devote his entire attention to the home office. Barre was sorry to lose him. He was just the right sort.

The firm of Milne & Williams has dissolved partnership.

James Houghton, who went to Vladivostok, Russia, last year to manage a large quarry for a New York firm, has just returned to Barre. He was stationed on an island about twenty miles from the mainland, but the Japs threatened to make quarrying as difficult a job as Jack Frost did in Barre last winter, and the company concluded to postpone operations.

Jones Bros. have finished setting up the Dewey monument in Green Mount cemetery at Montpelier. It is appropriate to the name it bears.

A 20-ton traveling crane collapsed at Thomas Eagan's shed in Montpelier a few weeks ago while lifting a heavy stone. The stone landed on a flat car between four men who were loading it, and the derrick man fell with the machinery but no one was hurt.

The Ryle & McCormick Co., of Montpelier, had one of the pieces for the St. Louis exhibit. It is a combination of hammered, polished and carved work that makes a very creditable showing.

The committee of inspection on the St. Louis exhibit work consisted of William Marr, George Gray, W. S. Alexander and William Barclay, and during the past month they gave complimentary judgment on jobs but by Ryle & McCormick, Marr & Gordon, Emslie, McLeod & Co., McIver & Mathieson, E. L. Smith & Co., and Stephen & Gerrard.

John E. Smith and Donald Smith, of the firm of E. L. Smith & Co., met with a sad loss by the death of their mother, Mrs. Angus Smith, who died last month at the age of 75 years.

William Cowie, a well known granite manufacturer of South Ryegate, died suddenly a few weeks ago of pneumonia. He leaves a wife and four young boys.

Rock Products and the trade in general extends most heartfelt sympathy to Alexander Gordon, of the firm of Marr & Gordon, over the death of Mrs. Gordon, which took place on April 26.

Barre is glad to welcome William M. Fraser, recently of Quincy, who comes here to engage in building work, having formed the Granite Construction Co. The object of the organization is the manufacture of granite for building and construction purposes. Several men in this city are interested in the project and there is every reason to venture a prediction that Barre is about to enter upon a new era, not the smallest feature of which will be a remarkable growth in the building output. Mr. Fraser was the superintendent of the building and construction work of the combine owning the granite quarries at Quincy. Prior to that he was the general manager of the Maryland Granite Co., at Baltimore, and built the Baltimore custom house, a half million dollar job. The firm had nearly two million dollars worth of contracts during the last year that Mr. Fraser was with them. He is a hustler and he will make a success of it.

Two quarriesmen were hurt in an accident at Blue Mountain in South Ryegate last week. Dan-

iel Morrison and Alex McDonald were pouring powder into a seam when one stone slipped and ignited the powder, blowing the keg out from under the arm of Morrison. He was blown about 15 feet into the air and had all the hair burned off his head. He may lose his sight. The other man was only slightly injured.

The stone shed of Patrick T. Kane, at Montpelier, was closed temporarily last month on account of a financial entanglement. It is understood that everything has been satisfactorily adjusted.

#### The Transportation Trouble.

It is not necessary to mention any names, but men who know what they are talking about and who know where to get the stuff to talk with, are getting interested in the question of transportation of granite from the quarries to the cutting plants. Something is radically wrong when the old-fashioned way of horse trucks is cheaper, or at least as cheap, as the railroads. If transportation from Barre to California were to be conducted on the same trust basis as the transportation system between the quarries and the stone sheds, we should probably expect to see a caravan of government mules start out from Barre about the first of July to convey to the Pacific slope that grist of small monuments that were ordered from Barclay Bros. last week. Fortunately, however, competition has placed interstate transportation on a more reasonable basis. To make a long story short let us predict that within a very short time an electric railway line will extend around the Barre quarries, and the freight rates become less from Graniteville to Barre than they are from Barre to New York. There is not a granite man in Barre who has been approached on this subject who has not enthused over the possibility.

#### Monumental Line Dull.

Well, there is no call for excuses or trying to evade the question. Business in the monumental line is remarkably dull. Barre has not seen a time in recent years when there has been so little work in April and so little work ahead for the summer. A visit to the various stone sheds finds the same condition in nearly every case, the large ones the same as the small ones. If a firm is more than usually rushed it is because late orders for Memorial Day work have come in. Occasionally a man has happened to stumble on to enough to make the summer look like a busy one, but this is not the rule. Of course everybody knows that this condition is only temporary, but it doesn't improve a man's temper to any great extent. Several things combine to cause these conditions. The severe winter all over the country and the late spring following it has made it impossible for the retailer to do very much, and orders that would naturally come in in February and March have not come yet. The long embargo on freight tied up a great deal of work and payments have been delayed accordingly. A presidential year always shows a let up in business, but in spite of all these obstacles the belief is general that another month will bring all the orders into Barre that can be handled during the summer. Now is a good time to send them in.

#### No Strike Here.

In spite of the lurid newspaper reports to the effect that a big strike was on in Barre last month there was no trouble, and the only reason why the stone sheds were closed for two days was to give plenty of opportunity for a permanent adjustment of the quite unimportant matter of division of labor on the Pirie tool sharpening machine, which has been in successful operation at Barclay Bros.' shed. The final settlement was caused by the tool sharpeners signing the agreement that had been reached by the conference committee several weeks before, and sanctioned by the National Union headquarters. The agreement provides that two journeymen tool sharpeners are to be employed on the Pirie machine.

#### New Firms and New Lines.

The era of building work has come to Barre and it has come to stay. Some of the most reliable firms in the business have announced their determination of going into it and the fact that they have done so is a guarantee that it will be a success. Barre's hills have got a monopoly on the "goods" and the facilities for quarrying and cutting have as yet been unexcelled. The announcement is made as we go to press that D. M. Miles, an energetic capitalist and business man of this city, has purchased the interest of C. A. Bond, in the Bond & Whitcombs quarry, and that they are going into building work for all there is in it.

The firm will have plenty of capital, and Mr. Miles will be a most valuable addition, not only to this firm, but to the trade in general. Rock Products will contain a more extensive description of this firm and its quarry in a later issue.

Along with this announcement comes the news that George Straiton, for many years one of the most successful monumental manufacturers, has purchased a one-sixth interest in the Barre White Granite Co. quarry, and he too is to add the building line to his monumental work. Mr. Straiton is to put a 100-ft. addition on to his cutting plant at once, and with the co-operation of the Barre White Granite Co., which is one of the most strongly financial institutions in the city, is in a fair way to create a decided sensation in the granite world.

#### History of First Quarry.

Now in regard to this quarry and the company that owns it. It was opened over forty years ago by one Eliphalet Hewitt, who made a business of manufacturing mill stones. P. O. Wheaton operated it for thirty years, and on April 1, 1903, a company composed of John and Donald Smith (who are the firm of E. L. Smith & Co.), John Trow (president of the Granite Savings Bank), N. D. Phelps and Henry A. Phelps purchased the quarry and the entire hill surrounding it, making in all one hundred acres of land easily accessible and containing an inexhaustible supply of beautiful white granite. They at once put in new machinery and placed the business under the personal management of N. D. Phelps. It was an interesting trip that your representative made to this hill a few days ago. The first quarrying ever done in Barre was done here. A deep hole containing thirty feet of water may now be seen where E. L. Smith opened one of the first quarries, but abandoned it after a short time owing to the difficulty of getting out the stock with the primitive tools available at that time. It was on that quarry that Azro D. Morse, another pioneer, did his first day's work in connection with the industry which built a fortune for him later. Near this spot can be found the place where the granite for the Vermont statehouse was cut out. Evidences of the primitive methods then in use are still apparent, notably the device for cutting out the blocks from the solid rock by drilling extended oblong holes and inserting wooden wedges, which, when soaked in lime water, would swell and split the rock. Any one who has occasion to visit Cobble Hill at the present time must gaze with wonder at the remarkable progress that has been made since those days, as may be seen in the up-to-date appliances with which the active quarry is now equipped.

No more able man could have been found to manage this business than the Hon. N. D. Phelps. He has made a success of everything he has undertaken, and in company with the associates who are joint owners of the property, it makes a powerful combination. Mr. Phelps has served one term as mayor of his city, and at present represents Washington County in the Vermont Senate.

Among the important jobs that have been cut from this quarry are the Vermont statehouse, the Twombly monuments at Woodlawn cemetery, New York, the Shiloh battle monument, and the Lovejoy monument at Alton, Ill.

Some time during the first of November last the United States Congress directed the engineer commissioner of the District of Columbia to inspect the Barre quarries with a view to its practicability for building purposes within that district. Captain Chester Harding was accordingly detailed to make the inspection and he came here about December 1. He made a thorough investigation and his report recently filed is as follows:

#### Captain Harding's Report.

"My inspection of the granite industries at Barre was made on December 4. Barre is six miles by rail southeast of Montpelier, on the branch line of the Vermont Central, running from Montpelier Junction. Due to the development of the granite industry it has grown during the past ten years from a small village to a thriving town of 11,000 inhabitants. Heretofore the granite has found a market for monumental purposes mainly, but efforts are now being made to enter the broader field of stone for building purposes. I am indebted to the proprietors of the various quarries visited for their courtesy in providing excellent facilities for my inspection, and in giving me ample opportunities to acquire information. The principal deposit of granite thus far developed occurs in Millstone Hill, three miles south of Barre, which rises to a

height of 1,000 feet above the grade of the railroad track at Barre. A standard gauge railroad ascends the hill with a grade of five per cent. There are two different varieties of granite in the deposit, a light and a dark, but in each variety the color is uniform. The quarries on the east side of the hill furnish the light granite and the dark granite is confined to the west slope. The light granite occurs in sheets and the dark in large irregular masses, but with well defined planes of cleavage. The size of the monoliths which any of these quarries can supply is limited only by the possibilities of transportation. The quarries are fully equipped with modern machinery and the facilities for getting out and transporting the stone are excellent. The stone is perfect in uniformity and quality, and the supply is practically inexhaustible. The output of one of the largest of the quarries during the past year was 150,000 cubic feet of monumental stone. The proprietor of this quarry informed me that if required to fill a large contract for building stone in the shortest possible time, he would estimate the capacity of his quarry to be 30,000 and 40,000 cubic feet per month. In addition to the Millstone hill quarries, a large deposit of granite exists in a hill about two miles east of Barre. Stone from this hill was used in the construction of the capital at Montpelier about sixty years ago. I made an inspection of a quarry on this hill in the afternoon of December 4. This stone has been quarried on a small scale from that time, and during the past year considerable development has been made by the Barre White Granite Co., who now control the quarrying rights on the hill. The stone from this quarry is lighter in color than any other Barre granite, and is excellent material for building purposes. The granite occurs in the sheet formation, is easily quarried and the supply is practically without limit. My impressions of all the Barre quarries were distinctly favorable, and the granite is in every respect excellent for building purposes. CHESTER HARDING, "Capt. Corps Engineers, Asst. to Engineer Com."

#### Great Tool Perfected.

The Pirie tool sharpening machine has been perfected. It has been proved to be a success by its operation at Barclay Bros.' shed, and the inventor is now ready to place his machines on the market. He has already sold one to Ryle & McCormick and another to the Webb Construction Co., at Worcester, Mass. The capacity of the machine is 75 men, but it can be profitably used wherever fifty cutters are employed within a radius of one mile, either at one shed or at different ones. Since the matter of the division of labor has been settled, the men have been exerting themselves to get the best work out of it, and these are the words that Mayor Barclay, of Barclay Bros., used the other day: "It is a success." Mr. Pirie has worked patiently on this device for eleven years and he deserves the patronage of those whom his invention will benefit. His business address is The Pirie Tool Sharpening Machine Co., Montpelier, Vt.

#### QUINCY.

QUINCY, MASS., April 26.—The months of March and April have been busy ones with the granite men of this city. Ever since the advent of good weather, quarry operators and manufacturers have been on the alert, so as to have the Memorial Day orders shipped on time. In the majority of cases and particularly among the retailers the task of timely completion and shipment will be easy. There are others where shipments will be necessarily delayed, but the manufacturers in many instances are working overtime so as to have the bulk of their spring work finished for erection prior to Memorial Day.

#### Good Prospects.

There is a likelihood of a fair summer trade. Orders are being slowly placed however, but those that have been closed are of such a kind that prompts the manufacturer to believe a good summer and fall business is in store for them.

#### Death of John H. Bishop.

John H. Bishop, a well-known manufacturer died in the Carney Hospital, Boston, April 11, as the result of an operation for a stomach trouble. Mr. Bishop has been in failing health for some time and his death was not unexpected. He was in Quincy where he followed the granite business. At an early age he came to this country and settled in Quincy where he followed the granite business. His work was largely of the retail order and many fine monuments manufactured by him adorn the

cemeteries of Greater Boston. He leaves a widow and son to mourn his loss.

#### Death of Thomas W. Smith.

Thomas W. Smith, one of the best known of the city's granite manufacturers, died April 17. He had been operated upon the day previous for a kidney and stomach trouble, but did not survive the shock.

Mr. Smith was born in England 57 years ago and came to this country in 1874. He engaged in the stone polishing business under the firm name of Murdock & Smith, and once operated a plant on the site of the present Fore River shipyard. Later he started in business for himself and had an extensive plant. He was a Republican in politics, was elected to the City Council in 1900, 1901, 1902 and 1903. He was very popular with all that knew him. He was a member of the Granite Manufacturers' Association, Mt. Nollaston Lodge I. O. O. F. and Granite Lodge Sons of St. George. A widow and several children survive him.

#### CHAT OF THE TRADE.

Thomas & Miller are erecting a large office and show room in their extensive property in South Quincy.

Kemp & Mundle are occupying the modern equipped plant lately vacated by Cook & Watkins in South Quincy.

The Granite Railway Co. has opened a new quarry adjacent to its celebrated extra dark deposit in West Quincy.

Murray Bros. are to extend and otherwise improve their plant as soon as the spring rush of work is over.

Ferrari Bros. have installed an engine and pneumatic tool plant at their works in South Quincy and intend to make a specialty of statuary and carving.

Edward McLean, Chicago, Ill.; William Gray, Philadelphia, Pa.; W. Peverley, of Peverley Bros., Philadelphia, Pa.; Stephen Maslen, Hartford, Ct.; S. B. Merrell, Lynn, Mass.; and Michael Sexton, Bridgeport, Ct., were among those to visit the trade during the past month.

Following is the shipment of rough and finished granite during the month of March: Quincy Adams, 4,815,500 pounds, West Quincy, 3,180,765 pounds, via Quarry Railroad, 59,200 pounds. Total 8,055,465.

#### The Swingle and Falconer Quarry.

The firm of Swingle & Falconer merits commendation for the advance it has made in marketing

home granite in its rough and finished state. They of all others have achieved unqualified success and are worthy of praise from their competitors for maintaining and keeping before the trade the reputation of Quincy granite. Not content with sending out the best of work from their manufacturing plant they lately purchased a quarry the reputation of whose excellent stock had long been established. At the quarry which came under their control in February, 1902, they introduced up-to-date and progressive ideas, so that to-day accessibility to its excellent yield is unparalleled in the city. The quarry was formerly owned by Elcock & Sons, and its stock has always enjoyed an enviable reputation. Since coming under control of Swingle & Falconer many improvements have been introduced and at present the extra dark and dark stock is easily available, lying in convenient trenches as seen by the accompanying cut.

The firm's first purpose in purchasing the quarry was to supply the demand of their extensive manufacturing plant, located in South Quincy.

The manufacturing plant had first call, but once the modern method of quarrying was applied to their new possession other concerns were supplied, so that at this writing a corps of quarry men are kept on the alert furnishing the trade with rough stock in large and small quantities. The property is located "on the mountain," in West Quincy and is adjacent to the extra dark quarry of the Granite Railway Co.

To perseverance and push the quarry has rapidly responded and the installation of larger derricks and machinery is already contemplated, so as to cope successfully with the increase of orders.

#### BANGOR, ME.

Queen City Granite Co., run by John A. Bucklesley, report business good now, but summer prospects none too bright. When we asked them about strikes they said we have none. What's the use, when the stone cutters ask for anything we just give it to them, but it is not because we want to do it.

Constantine Bros., of this city, have purchased and are operating what is known as the old Dr. Jewell quarry at Lincoln, Me.

Wm. Grady, a prominent Bangor attorney, with his father, has organized and incorporated The Grady Construction Co., of Bangor, for the purpose of doing contract work. This company has a fine suite of offices in the East Block.



SWINGLE & FALCONER QUARRY, QUINCY, MASS.



David Brown, of Holden, Me., has opened up a nice new quarry on gray granite on the Maine Central railroad. Mr. Brown gets out curbing, crosswalks and pavers and operates a crusher, doing considerable business in Bangor. Granite men of Bangor think considerable of David.

Frank Wallace, Head Harbor, Jonesport, Me., has recently placed a contract on red granite that is good for two years' work. He is in consequence a very busy man just now.

### WESTERLY, RHODE ISLAND.

WESTERLY, R. I., April 29.—After a winter of extreme dullness in the granite business, work is being resumed in the different quarries. The granite cutters and quarrymen are getting back to work after a long spell of idleness and three gangs of cutters have been put to work at one quarry and in the other quarries cutters are being put to work as fast as stone can be secured. Since good weather has made its appearance the resumption of the granite industry is welcomed by the workmen and business men alike. There is every prospect for a steady summer's work.

The Rhode Island granite industry is growing steadily and is now quite a factor. In 1891 the value of the Rhode Island granite was \$501,698.00, and in 1902 the production was increased to \$734,623.00, and last year the increase was proportionately the same.

Adrian Pierce, Westerly, R. I., is opening up a new quarry.

The quarries at Red Granite, Wis., will commence operations May 10.

The Marathon Granite Co., Warsaw, Wis., have opened the season's operations.

Peckham Bros., Middletown, Conn., have begun operations at their granite quarries.

Campbell & Simmers, St. Cloud, Minn., are shipping rough granite to Los Angeles, Cal., to be used in monumental work there.

The Granite and Marble Co., of Abilene, Kan., has been reorganized by the election of J. D. Blake, president, and J. Glimpse, secretary. Mr. Blake is now in Oklahoma looking after the plant.

The reorganization of the Delaware Granite and Mining Co., of Wilmington, Del., has been affected by the election of the following officers: Andrew C. Gray, president; Herbert H. Ward, vice president; John N. Carswell, secretary-treasurer.

The New Bedford Granite Co., New Bedford, Mass., is a new company which recently bought the granite quarry of John B. Jean, which they will proceed to operate upon contracts already secured. The officers of the company are: John B. Jean, president; Francis A. Bonneau, treasurer.

Louis F. Zoeller has recently discovered a very large quantity of fine granite on his farm near Cadiz, Ky. It is of dark color and very hard. Several experts pronounced it of fine quality, and some large samples have been received in Louisville to be put in the Kentucky exhibit at the St. Louis Fair.

The Flint Granite Co., Springfield, Mass., have begun operations for the season. A backward spring has prevented them opening up earlier. The Hudson & Chester Co. are also getting things in shape to open up. Both companies have many orders booked and expect to do more business than ever. There were large expenditures of money for new machinery at the quarries last year, and an attempt will be made to greatly increase the former output.

The Lone Star Granite Co., San Antonio, Texas, has been awarded the contract to supply the stone for the erection of the new Federal postoffice building at Kansas City, Mo. The contract amounts to \$105,000.00, and Mr. Charles Mierow, of San Antonio is general manager of the company. He hopes that this may be the means of introducing Texas granite throughout the country in the construction of Federal buildings. A prejudice against Texas granite has long existed in the minds of Federal authorities, and it seems that they had been informed that the Texas quarries were exhausted. The matter was dispelled when it was shown there is sufficient granite above ground in the district to supply every building that might be erected in the whole United States for the next 1,000 years, and of quality up to specifications required.

## Slate.

### MAINE SLATE INDUSTRY.

BROWNVILLE, ME., April 23.—The Maine slate has been well known for many years and to-day commands a higher price than any other black slate quarried in this country. The quality of the slate is so well known that it is hardly worth while to say anything with reference to its properties. It is a smooth tough slate, almost free from grit, and an unfading black in color.

The entire output of Maine comes from a comparatively narrow belt. The seat of this industry is located at Brownville for roofing slate; at Monson and North Blanchard for mill and dimension slate, as well as for roofing purposes. At the latter two places the roofing slate business seems to be secondary to the mill slate.

#### Brownville.

At Brownville two companies are operating, the Brownville Maine Slate Co., O. W. Norcross, president; Albert J. Park, treasurer, and W. E. Howes, superintendent. The main office of the company is at Worcester, Mass. This company is operating what was formerly known as the Old Crocker Quarries, and was the first one to be opened at Brownville. This company probably has the largest roofing slate mill in the country. The mill is thoroughly equipped with everything essential to the economic production of slate for roofing purposes.



New Quarry of Monson Slate Co., Monson, Me.

The slate is separated into three grades. No. 1 is uniform in thickness, with both sides clear. No. 2 has one side clear. No. 3 is what is left. This slate is sold on a basis of three inch lap. There is a difference of \$1.00 per square between No. 1 and No. 2, and \$3.00 per square between No. 1 and No. 3. The slate weighs, No. 1 approximately, 700 pounds to the square. Two and three about 750 pounds.

Saws working on this slate require sharpening on an average once in three days. Water is used in sawing, not to prevent the saw from heating, but to prevent the slate from heating and drying out of the sawed edge, because if the edge becomes dry the slate will not split well.

An enormous amount of slate has been taken out of this quarry, and in consequence of this and its age it is a very large quarry. A portion of the quarry, which has now been abandoned was worked about 150 feet wide, and about 400 feet long, and to a depth of 300 feet. The quarry of course appears much wider than this owing to the fact that year after year more or less of the side walls are loosened by frost and come down. Present operations are being carried on on the same vein immediately back of the old openings, and they are now at a depth of about 100 feet. Cables are used for handling of the material.



Quarry of Maine Slate Co., Monson, Me.

This company has about 15 to 20 feet of gravel to remove, and have been using hydraulic stripping for the last two years, getting their water pressure from a dam back in the hills. The gravel was washed over into the old opening. Mr. Howes says that this would work fine if it were not for the large boulders which they had to encounter which make it necessary for them to be removed with a derrick, and it is possible that they will go back to hand labor for stripping.

The other company operating here is the Merrill Brownville Slate Co., F. W. Merrill, president; S. P. Johnson, treasurer; C. H. Dunning, superintendent; main office at Brownville, Maine.

This quarry was opened shortly after the other one, and what has been said with reference to the other quarry in the main applies to this one. This quarry was opened by Ben Williams, but was shortly purchased by A. H. Merrill, and a Welshman who had been dealing in slate imported from Wales, Mr. A. Wilbur. This purchase took place about 1850. Some time later Mr. Merrill purchased Wilbur's interest, and the property which is now incorporated is owned by Mr. A. H. Merrill's heirs.

This company has been rather unfortunate during the last few years in that the property was sold and after the loss of the output of the company they found it necessary to take the property back, and when it reverted to them the quarry was left in a very bad physical condition, the side walls coming in and the way slate had been allowed to accumulate for several years in the quarry. While they have been at work for some time removing the litter, it has limited the output of slate, but it will only be a short while until they will have abundance of good slate available, again.

The slate at this quarry is the same as that described for the other. This company owns a great deal of land, much of which carries good timber. About a mile from the present mill they have a free milling slate which is undeveloped. If this property is all that they think it is it must be a good one.

#### Blanchard.

At North Blanchard the properties known as the Blanchard Slate Mining Co., with headquarters in Bangor, are under lease to the Lowell Slate Co., Lowell, Mass. General Charles Hamlin is the prime factor in the former company, and J. L. Douglass, of Lowell, is manager of the latter. The Mining company has three properties, the one right at North Blanchard which has been in operation all winter, another about one mile from this location which has been idle for some time, but will be put in operation within a few weeks. The other is close to and on the same vein as the first location, and a new mill has been built and quarry just opened. It is probable this property will be opened and a slate producer before the summer is over. A. E. Bartlett at North Blanchard, is superintendent of these properties. At the old quarry they are now down about 200 feet. The quarry is about 50 by 500. The vein is about 50 feet wide, and furnishes about 30 feet of workable slate in bodies varying from 6 inches to 3 feet. This quarry furnishes very large slabs when desired. Mr. Bartlett says it is a frequent occurrence to get slabs loosened so large that they

have to plug-hole them and break them up before they can raise them. They have raised slabs 6 feet by 12, and have often had them in the quarry 12 by 25 feet.

There is a thoroughly equipped mill on the property, and only a short haul to the B. & A. railroad.

#### Monson.

The Monson (Maine) Slate Co. is probably the largest operator in Monson. The Monson end is in charge of F. H. Crane. The main office is 113 Devonshire Street, Boston. This company has eight or ten quarries, but is only operating two or three of them. These quarries are narrower, longer, and probably about as deep as those already mentioned. The mill site has connection by switch with the Monson railroad, which is a very narrow narrow-gauge railroad, and probably has the distinction of being the smallest railroad in the country. It probably also has the distinction of getting the highest rate per mile, both for freight and passenger traffic. The passenger rate is 10c per mile; the freight rate for roofing slate is 30c a ton for a five-mile haul, which is the length of the road. First class freight 7½c per hundred; second class, 6c; third class, 5c; fourth class, 4c.

The Monson Consolidated Slate Co.'s property consists of three quarries located from 1 to 3 miles from the village, with the mill at the quarry which is about one mile from town. This company's mill is large and equipped with a complete complement of machinery for turning out mill, dimension and electrical slate. The milling quality of the slate quarried here is probably as fine as anything found in the United States. It works so smooth and readily under the tools that it reminds you of a soap stone factory, and it is used for many purposes for which soap stone has been used. Like the other slate in this section it is a jet black. It is largely used for laundry tubs, sinks, sanitary plumbing, electrical switch boards, and electrical installation. For electrical purposes some very small pieces are cut. Blocks less than an inch square, and ⅜ thick are often called for, as well as pencils, ¼ thick by ⅝ wide, and from 3 to 5 inches long. It requires a very even grained slate to furnish such material.

The quarry resembles a long, very deep trench, being only 12 to 15 feet wide, and several hundred feet deep. Some of the other quarries of this company are wider than this. The company is at present only operating the two quarries which are close to the mill. The Monson end of the business is in charge of H. T. Bibber at Monson. The general offices are at Bath in charge of Geo. W. Johnson, who is manager of the company, and a member of the firm of Johnson Bros., of that place, dealers in hardware and general builders' supplies.

The other company operating at Monson is the Monson Slate Co., which is being started under the management of Fred Wilkins, at Monson. H. H. Matthews, of Boston, is interested in this property. The quarry is located not far from the B. & A. railroad, and about a mile from Blanchard, and three miles from Monson. Mr. Wilkins has made good time in getting this property opened. He has only been at it since last fall, and now has the quarry in such shape that considerable slate is available at once. The building and equipment are all new and a mill will be built at once. The saws and mill machinery are already on the ground. This is also a ready milling slate, and is one of the most promising properties which has ever been opened up in this section.

The present mill is to be located at the quarry, which lies considerably higher than the railroad. The company owns the property rights down to the railroad and intends later to build another mill along side the railroad.

This company has a number of quarry sites on their property.

The Monson Slate Co. also has another factor in its favor since in Fred Wilkins it has a man of wide experience in the production of slate. Mr. Wilkins has been actively connected in the slate production at Monson for the last twenty-five or thirty years, and prior to that had had six years' experience in different Canadian quarries and mills.

Quarry practice at Monson and Blanchard differs from that at Brownville and that in the Pennsylvania belt in that they use derricks entirely at Monson instead of blondins as is the practice elsewhere.

Morgan Bros., expert slaters, Fort Scott, Ark., will cover a large building they are erecting, with slate to be furnished by the Southwestern Slate and Manufacturing Co., of Slatington, Ark.

Dr. W. A. Tenney and J. F. Bromley, of Granville, N. Y., are opening a slate quarry in the vicinity of that place.

The New York Standard Slate Co., Allentown, Pa., have resumed operations at its works after an idleness of four months.

The H. H. Matthews Slate Co., of Poultney, Vt., are getting out the tiles for the wainscoting of the subway in New York.

The Pennyston Slate Mill in Middle Granville, N. Y., is preparing blocks of different colored slate for the St. Louis Exposition.

Mr. Richard Owens, of Slatington, Pa., superintendent of the new Standard Slate Co., is opening up a quarry north of Slatedale.

The Vermont Black Slate Co.'s quarry at Northfield, Vt., have resumed operations, having put in a new planer and other machinery.

The North Wales Slate Co., of Mason City, Iowa, has been organized with a capital of \$50,000.00, by Clark Cole, R. S. Duffield and C. E. Ransier.

Steward H. Hopkins, president of the New Jersey Slate Co., Newton, N. J., declares the concern insolvent and has asked the Chancery Court to appoint a receiver.

The Unfading Green Slate Co., of New York, have acquired a slate mill and machinery of W. H. Pelkey, at Fair Haven, Vt. The company have been operating a quarry for some time.



Mill of Monson Consolidated Slate Co.

The Pittston Slate Co., Pittston, Pa., have elected the following directors: L. A. Waters, William Drury, R. K. Hileman, John M. Armstrong, Theodore G. Wolf, E. B. Long and C. M. Hileman.

The Morris Slate Co., Rutland, Vt., which was recently organized, has purchased the old engines and hoisting apparatus belonging to the Erie Slate Co., at South Poultney. They will proceed to operate the quarry.

The Gem Slate Quarry near Allentown, Pa., has been sold at receiver's sale to Cotton Amy, of East Bangor, for \$30,000.00, subject to a mortgage of \$25,000.00. The purchaser will operate the quarry.

The Vermont Slate Co., of Zanesville, Ohio, of which S. Mills, Jr., is a member, is in a suit in Federal Court at Cincinnati, to break a boycott against their slate instituted by the Amalgamated Association of Sheet Metal Workers.

The New Jersey Slate Co., of Newton, N. J., has been ordered to show cause why a receiver should not be appointed. The liabilities of the company are stated at \$60,300.00, assets at \$53,650.00. Arthur J. Hamilton is president of the company.

The New York Consolidated Slate Co., Poultney, Vt., has been incorporated with the following officers: E. J. Stanley, president; Robt. E. Cushman, vice president; M. J. Jones, secretary-treasurer, to develop the Roach quarry. New machinery is now being installed.

The Bangorvein Slate Co., has been incorporated at Bangor, Pa., with a capital stock of \$10,000.00. The stockholders of the company are: E. J. Johnson, New York City; M. James Spry, Bangor; E. S. Albertson, Bangor, and Mr. Johnson is treasurer of the company.

**Write ROCK PRODUCTS advertisers when in want of machinery or supplies.**

#### Shipping Pretty Lively.

SLATINGTON, Pa., April 28.—The slate trade has been exceedingly dull so far this year. Orders are far behind in our shipments for 1903. But we must remember that this season is fully six weeks late. We are now commencing to ship pretty lively and the outlook from the inquiries that are coming would indicate a brisk trade for May and June. We hear of no cut in prices only with some parties who are manufacturing quite a good deal of top slate that is not up to the standard in quality, and are anxious to move them early in the season. Otherwise prices are firm and we have no doubt but that we will be able to dispose of all that we can make. DAVID McKENNA.

#### SAND.

The Millington White Sand Co., Earlville, Ill., is spending \$8,000.00 in improving its plant.

The Pacific Glass Sand Co. has been incorporated at St. Louis, Mo., with a capital stock of \$50,000.00.

The Alton Sand and Transportation Co. has been incorporated at Alton, Ill., with a capital stock of \$2,500.00.

Reports from Reading, Pa., state that E. C. Kirschmann, of that place is preparing to engage in the sand business.

It is reported that the Eddyville Sand Co. of Oskaola, Iowa, is getting out large quantities of sand, though not working at their full capacity at present.

The Altoona (Ill.) Sand and Stone Co. made a record job of loading one day last month, loading 100 tons of sand in cars between the hours of 7 and 11 a. m.

The Winchester Gravel Co., of Winchester, Ind., has been incorporated by L. Moorman and others, to deal in sand and gravel. It has a capital stock of \$3,000.00.

The Silicate Stone Co., Washington, D. C., has been incorporated with a capital stock of \$5,000,000.00, by Walter W. He, Oscar L. Verchio and R. S. Donaldson.

The Dallas Gravel Co. has been incorporated at Dallas, Tex., with a capital stock of \$5,000.00. The incorporators are: G. P. Lane, E. W. Luna and W. R. McClellan, of Dallas.

The Iowa Wood and Sand Co., of Davenport, Iowa, has been incorporated with a capital of \$15,000.00, Capt. C. W. Schriker president; and A. W. Hamann, vice president.

The American Sand and Supply Co., of Kansas City, Mo., is looking for a location near St. Paul or Minneapolis, for a branch of its business. The company expects to invest \$20,000.00 to \$25,000.00 in the new location.

The State Sand Co., 785 Main Street, Patterson, N. J., has been incorporated with a capital stock of \$30,000.00, by Cyril R. Forbes, John W. Ferguson, James Higgins, William A. Forbes, John M. Gallagher and Michael Lynch.

The Hoosier Slide Sand Co., has been incorporated at Michigan City, Ind., with a capital stock of \$10,000.00, with the following directors: Wm. B. Manny, Wm. L. Rawling and others.

The Parkersburg Sand and Dredging Co., Parkersburg, W. Va., has been incorporated for the purpose of dealing in sand and doing a general contracting business with a capital stock of \$10,000.00. The incorporators are: L. Cramer, David Boyles, C. E. Morrison, M. B. Gibbens and E. F. Wilson, all of Parkersburg.

The Preston Glass Sand Co., with a capital stock of \$25,000.00, at Cumberland, Md., has purchased from the Preston Lumber and Coal Co., in Preston County, W. Va., just west of Oakland, Md., a tract of land containing a fine body of almost pure silica which they expect to develop. This company is said to be composed of Maryland and West Virginia capitalists.

The Trout Sand Works, at Landsville, Pa., are among the oldest silica sand concerns in the country. They have shipped silica sand since 1870. The Pennsylvania Steel Co., of Steelton, has been for a long time one of its principal customers, using 1500 tons annually. Mr. Trout is shipping thousands of tons to the Eastern iron manufacturers. He writes that he expects good business this year.



# Monuments.

Wautoma, Wis., is to have a soldiers' monument, Waushara County having appropriated \$1,000.00 for that purpose.

J. B. Williams & Co., of Cumberland, Md., are erecting several monuments in Green Mount and Baltimore cemeteries.

Ladies of Joe Hanna Post, No. 236, G. A. R., have started a subscription for the erection of a monument at Peoria, Ill.

The Park Board of Portland, Oregon, are asking for bids for the building of steps to the Lewis and Clark monument in that city.

Col. C. R. E. Koch, 56 La Salle Street, Chicago, Ill., is inviting bids for the construction of a State monument at the Vicksburg Military Park.

The Senate at Albany has passed a bill calling for the erection of a monument to the Fifth Regiment of New York volunteers at Bull Run.

H. C. Friederichs, formerly interested in the Watseka marble works, has purchased the Henry Faesler monument establishment in Kankakee, Ill.

The Woman's Relief Corps, of Bloomington, Ill., is erecting a monument to the unknown dead in the cemetery, and have appropriated \$600.00 for the purpose.

Judge J. F. Mulally, of Laredo, Tex., says that a movement has been put on foot by which a monument is to be erected to the memory of Hon. J. O. Nicholson.

Citizens of Bunker Hill, Ill., will erect a pedestal for the reception of a statue of Abraham Lincoln. The new statue is a gift of Capt. Clinton, of Avondale, Ohio.

The L. D. H. Crane Post, G. A. R., have decided the details of a monument which they expect to erect this summer at the soldiers lot of the Beloit, Wis., cemetery.

A commission headed by Joseph Scott, of Los Angeles, Cal., have perfected plans for the erection of a memorial to the late Senator Stephen M. White in that city.

The citizens of Waco, Tex., headed by Mr. John W. Baker, will erect a monument to the memory of the hero, Governor Ross, as soon as enough subscriptions have been made available.

President Joseph F. Smith of the Mormon Church, Salt Lake City, Utah, has been authorized to take the proper steps to erect a monument to Joseph Smith, the founder of that faith.

Major W. F. Goodspeed, of Columbus, Ohio, chairman of the Ohio Monumental Commission, says that it is possible that the State of Ohio will erect another monument in Chickamauga Park.

The United Sons of the Confederate Veterans at Greenfield, S. C., have started a fund for the purpose of erecting a monument to the women whose efforts alone sustained the soldiers of the Confederacy.

A movement is on foot for the erection of a monument to the late Governor William A. Newell, of New Jersey. The plan has been given momentum daily and the monument is to be erected in Asbury Park.

The Royal Legion of Milwaukee, Wis., have appointed a committee for the purpose of erecting a monument to Abraham Lincoln to be dedicated upon the one hundredth anniversary of his birth, February 12, 1909.

The Burns Memorial and Monument Association of Chicago, Ill., is rushing its plans for the erection of a monument to Robert Burns. A committee has been appointed to confer with the park commissioners regarding a site.

A contract for the erection of a monument at Middletown, Conn., was signed recently by the Fox-Becker Granite Co. and the committee for the Twenty-fourth Regimental Association. It is to be ready for dedication by October 15.

The legislature of Ohio has appropriated \$10,000.00 for the erection of a monument to the late Gen. W. H. Gibson, to be erected at Tiffin, Ohio, on conditions that the city of Tiffin contribute the sum of \$8,000.00 for the same purpose.

United Daughters of the Confederacy at Trenton, Tenn., are viewing and discussing designs for a monument to the Confederate dead that is soon to be placed there. Incessantly have they worked several years to raise the necessary funds.

Mayor Vedder and John McDonald, of Los Angeles, Cal., are meeting with great success in their effort to raise \$7,500.00 to place a soldiers' monument in Library Park. There is every indication that the subscription will be closed in thirty days.

J. Hamilton & Son, of Batavia, N. Y., have sold their marble works to Worden Bros. Manufacturing Co., who will soon move their business from Danville to Batavia. The Hamilton concern has been in business at Batavia for more than half a century.

United Daughters of the Confederacy, at Carrollton, Ga., are raising a fund to be used in the erection of a monument to the Confederate dead of Carroll County. The subscription is progressing well, and the funds will be forthcoming by Decoration Day.

The senior class of Berkeley, Cal., College, have made arrangements to reset the Le Conte memorial tablet in front of the La Conte oak on commencement day. It will be mounted on a marble column and placed directly in front of the tree so that it may be seen by passers by.

The John B. Gordon Monument Association, Atlanta, Ga., are progressing with great success in the raising of subscriptions. The several committees believe that every camp of the Confederate Veterans will subscribe something, and they look for great results from all sources.

The United Mine Workers of America, district organization in Birmingham, Ala., is collecting money for the purpose of erecting a handsome monument over the grave of John Lamont. The funds will be in the hands of the committee soon. They are engaged in securing a site.

Mr. Louis Frechette has asked, the Board of Park Commissioners of Montreal, Canada, for a site in St. Louis Square to be provided for a monument to the French poet Cremazie. The request was favorably received and a report will be made so recommending it to the City Council.

Edwin E. Sparks, of Chicago, Ill., chairman of the State Historical Society, has recommended to Alton people that they erect suitable monuments on the historic spots in Alton and its vicinity, where the explorers of the Western country spent the winter before starting upon their journey to the Pacific Coast.

Secretary of War Taft has approved of the design submitted by Edward B. Valentine, Richmond, for a monument to be erected in memory of Gen. Hugh Mercer, a revolutionary hero, which is to be erected at Frederickburg, Md., in accordance with an act of Congress. \$25,000.00 was appropriated for the monument.

A movement has been started to build a monument to Senator Marcus A. Hanna. The Hanna Memorial Association has been organized for the purpose, of which Mr. Samuel Mather is chairman, and James L. H. Hoyt is secretary. The designing and execution of the monument has been offered to Augustus St. Gaudens. The details will be arranged after Mr. St. Gaudens has been heard from.

Mr. D. R. Wilkie, Col. Ryerson and John F. Ellis head a deputation of the South African Memorial Association to ask the city council of Toronto, Canada, to appropriate \$10,000.00, which added to the Government subscription of \$5,000.00 and private subscriptions of \$25,000.00, will be used in the erection of a shaft in Toronto as a memorial to Canadian soldiers who fell in the South African war.

The General Assembly of New York has passed a bill appropriating \$25,000.00 for a monument to be erected on the scene of the battle of White Plains. The commission that have the matter in charge are: Chauncey M. Depew, Whitelaw Reid, Norton P. Otis, Cornelius A. Pugsley, William L. Ward, William Popham Platt, James Wood, Ralph E. Prime, Theodore Finch, Theodore Gillman, Wm. A. Woodworth, the Rev. Charles E. Allison, D. D., Leslie Sutherland, Marcus D. Ray and Frank V. Millard. The commissioners are to receive no compensation.

The citizens of Bunker Hill, Ill., are raising money for the erection of a pedestal for the reception of a statue of Abraham Lincoln, a duplicate of the one now in Avondale.

A movement has been started in several of the Confederate camps in Texas to erect a monument over the grave of General Ben McCullough in the State cemetery at Austin.

The legislature of Wisconsin has made an appropriation for the building at Vicksburg, of a monument to commemorate the valor of the Wisconsin soldiers in the siege of 1863. The following commissioners have been appointed to superintend the building of the monument: Col. W. F. Vilas, General George E. Bryant and General A. G. Welsert.

## Extending Business.

HYNDMAN, PA., April 23.—My trade this year exceeds last year quite a bit, and I am as usual behind with my orders. To increase my business I have put on extra shop men and will put several extra salesmen on the road. Business is good and more granite sold every week. I wish you and your paper success. GEORGE W. GROCE.

## Complaints of Late Season.

BRYAN, OHIO, April 24.—Trade is dull compared with last year. No doubt on account of the late season. Will be able to get out about half my orders on account of the bad roads and cold weather. I have added to my plant in the way of improvements three pneumatic tools and am well pleased with them. I am manufacturing Missouri red granite and red Wisconsin granite as a specialty, and all other granites as needed. I will erect a boom derrick soon, don't know exactly what I want, but guess I will have to put in a stiff leg derrick, for I have limited space. I would like prices from builders of derricks suitable for my use. I want this derrick to pile stone up in my yard, and if necessary to take to station to unload cars. E. B. WILLET.

## Pneumatic Plant for Lettering.

FRANKFORT, IND., April 29.—Business with us is very good and we believe prospects in this section of the country are good. In the way of improvements, we have installed a pneumatic plant for lettering, have had it running but two weeks and we believe it will be a great advantage when we become acquainted with the use of same. CANN-HARSHMANN MONUMENT CO.

## The Milwaukee Monument Company.

This firm recently erected a large plant at 15th Street and Russell Avenue, Milwaukee, Wis. The main building which is of very substantial frame construction is 354 feet long by 64 feet wide and 44 feet high—the power house, containing engine, boilers, dynamos and air compressor being in a separate building.

This plant, which is built on the most up-to-date plans, is fully equipped with all the latest appliances for working granite. Among the more notable of the tools are a 30-ton electric crane, pneumatic surfacing machines, pneumatic hand tools, and cutting and polishing lathes.

The firm has been established thirty years and formerly operated quarries at Barre, Vt., but when it became evident that the State of Wisconsin possessed such rich granite deposits, producing material of a fine quality, they disposed of this Eastern holdings and became heavy investors in Wisconsin granite quarries.

They operate quarries in Waushara and Marathon Counties in Wisconsin. The products of the Waushara County quarries are known under the name of Wisconsin granite and the quarries in Marathon County furnish material known to the trade as red Wausaw granite. The Waushara County quarries are equipped with a complete crushing plant—the chief product now being paving blocks, crushed granite and monumental stone.

They have a large amount of work on hand and have been obliged to work night and day all winter to enable them to keep up with their orders. Their engines are of the latest design of Allis-Chalmers make, their boilers are made by Freeman & Son, of Racine, Wis. The 30-ton traveling electric crane was installed by the Lane Manufacturing Co., of Montpelier, Vt., the air compressor was furnished by the Ingersoll-Sergeant Co., and the polishing and cutting lathes made by the St. Cloud Iron Works, of St. Cloud, Minn.

The firm is composed of Otto Rathmann, president and treasurer; Conrad Roder, vice president, and August Krukel, secretary.

### Two Removal Notices.

The American Sand Lime Brick Co., have moved their offices from Devon Street to the Great Northern Building, corner Jackson Boulevard and Devon Street, Chicago, where they will have a line of sample brick made by their process on exhibition for the inspection of visitors.

The H. P. Binswanger Co., desire to announce that they have moved their offices from Fulton Street to the Bancroft Building, No. 3, West Twenty-ninth Street, New York. Telephone connections will be completed at once, the new call being Madison Square, No. 3144.

### ROOFING.

The Genosco Roofing Co., of New Jersey, has established a branch at Indianapolis, Ind., with \$1,000.00 capital. J. M. Connell is in charge of the plant.

The Jamaica Slate Roofing Supply Co., Jamaica, N. Y., has been incorporated. The directors are: Joseph Kellow, Lizzie P. Kellow and Lizzie P. Johnson, of Jamaica.

Milton J. Moore, Daniel D. Fisher and George M. Brown have incorporated The General Roofing Manufacturing Co., of East St. Louis, Ill., with a capital stock of \$20,000.00.

The Cement Roofing Co., of Grand Rapids, Mich., who are introducing a new method of roofing manufacture—a material which is largely composed of cement—have received the endorsement of a number of experts and have been greatly encouraged by their experiments. Several residences in Chicago have used the cement roofing, both the architect and builders expressing satisfaction.

Dr. Sanderson, of Jacksonville, Fla., in the building of his residence is using a new roofing material which consists of a tile made from clay found in Liberty County, Ga. It is claimed to have several peculiar advantages. It is always the same color, never requiring paint, and is perfectly and absolutely water proof. It is put on with a copper wire fastener, one piece fitting into another. The experiment will be watched with interest.

### FERTILIZER.

The Central Phosphate Co., of Mt. Pleasant, Tenn., has received an order for 10,000 of export rock to be delivered at once.

Mr. Tully, secretary of the Dominion Phosphate Co., has moved the office to Homeland, Fla., where he will be much nearer the plant.

The Big Swan Phosphate Co., Columbia, Tenn., has been incorporated with a capital of \$60,000.00. The incorporators are: John W. Fry, H. F. Alexander, G. W. Killebrew, S. C. Long and Frank Wheeler.

The Arkansas Phosphate Co., of which J. D. Goldman, of St. Louis, is the president, will rebuild their plant at Little Rock, Ark., which was recently destroyed by fire. Mr. F. S. Williams will continue as manager and the new capacity will be 50,000 tons annually.

Frank M. Griffin has recently discovered phosphate rock on his farm near Gallatin, Tenn. He has mined about one-tenth of an acre, from which he has taken one hundred tons. He is hauling the rock to Gallatin and shipping it from that point. He expects to mine and ship a carload each day. Two other mines in the neighborhood are being operated with a large force of hands.

Walton Quarries, Harrisburg, Pa., with quarries and kilns near Bridgeport Station, have issued an interesting and useful booklet about their patent process fertilizing lime, containing minute directions for the application of their product to the various needs of field and garden crops. It is most useful to the agriculturist in the north temperate zone. It is a revival of very ancient fertilizing material, indeed it may be said that it is so old as to be quite new.

We are indebted to D. W. Carritte, manager of the United States Drying Engineering Co., for a comprehensive catalogue of that company which is well worth a careful perusal.

## Plaster.

### The National Plaster Manufacturers' Association.

Meets Semi-Annually.

H. E. DINGLEY, Syracuse, N. Y., .....President  
A. H. LAUMAN, Pittsburg, Pa., .....First Vice President  
L. G. POWELL, Toledo, Ohio, .....Second Vice President  
JAS. LEENHOUTS, Grand Rapids, Mich., .....Third Vice President  
ALEXANDER FORRESTER, Cleveland, Ohio, .....Treasurer  
E. H. DEFEBAGH, Louisville, Ky., .....Secretary

Official Organ, ROCK PRODUCTS.

#### Wood Plaster Information.

The Dayton Fiber Plaster Co. have favored us with a catalogue in which is pointed out a number of points of superiority claimed for wood fiber plaster, among which are the following: It is a non conductor of heat and cold; it is both fireproof and waterproof; it is a non conductor of electricity, and is lighter in weight than ordinary plaster. They give directions for using wood fiber plaster, which are interesting and they will also prove of much value to the retailer who is seeking the best plaster and wants to know how to use it. For this reason we are reproducing them herewith:

#### Directions for Using Wood Fiber Plaster.

Grounds should be  $\frac{3}{4}$  inch ( $\frac{3}{4}$  inch for lath, and  $\frac{3}{4}$  inch for plaster). If the studding are sized, and we recommend that they should be,  $\frac{3}{4}$  inch grounds are sufficient. Lath should be spaced  $\frac{3}{4}$  inch on walls and  $\frac{3}{4}$  inch on ceilings.

We manufacture first coat, second coat, sand finish and white finish.

Lath work may be "browned" with either one or two coats as the plasterer prefers.

Second coat only, is used for brick work. If the lath are "browned" with two coats, fill out one-half the grounds with No. 1, or first coat, then draw up with the No. 2, or second coat, before the first coat commences to set.

If the lath are "browned" with one coat, fill out the grounds with No. 1, but special care must be taken to use sufficient pressure to get a good key. The white finish should not be applied until the base coat is thoroughly dry.

The sand finish should be applied before the base coat is dry.

Absolutely nothing but water must be added to the plaster.

If lime is used for a finishing coat instead of finish of our manufacture, it must be highly gauged with plaster of paris, to assure adhesion and prevent peeling.

The base coat can be left "rough cast" under the float, or can be troweled smooth for paper, just as it commences to set, thus avoiding the use of a finish coat.

#### Extensive Improvements.

LOVELAND, COLO., April 29.—Mr. Alfred Wild, proprietor of Wild's Loveland-Buckhorn plaster mills, four and one-half miles west of this place on a branch of the C. & S. railroad, will soon have in operation a tram railway capable of bringing fifty tons of gypsum rock a trip from his quarry, situated one-half mile from the mill. This plant has one of the finest deposits of gypsum known in America and has been pronounced equal to the Nova Scotia gypsum. Plasters made from same have obtained a wide reputation.

The Lithocollo Fireproof Plaster Co., at Haverstraw, N. Y., has been incorporated with a capital stock of \$500,000.00 for the purpose of manufacturing fireproof wall plaster. The company has secured a location and will spend about \$75,000.00 in the erection of a plant during the coming summer, and the necessary machinery will be installed as soon as the plans are completed.

Write ROCK PRODUCTS advertisers when wanting machinery or supplies.

#### Change the Classification.

MOBILE, ALA., April 20.—We are of course vitally interested in the question of freight rates on cement and plaster. It has occurred to us, and upon that basis we have made a fight here, that plaster should be transported at the same rate as cement except in instances where a commodity rate has been otherwise satisfactorily adjusted.

The prepared plasters, with the exception of the high grade finish coat or plaster of paris, are in value per ton less than Portland cement, and surely should have a freight rate at least as low.

We hope that your efforts will be successful and we shall be very glad to co-operate with you.

ALABAMA PULP PLASTER CO.,  
H. H. FITTS.

#### Classification Hinders.

DAYTON, OHIO, April 15.—Beg to say we are interested in a class and rate of sanded wall plaster, and we think any effort to secure a difference in the class is a very good one, and hope it will be rewarded with the success it merits. From past experience we know the present class and rate prohibits us going into certain localities which, otherwise, would be good fields to work.

We will certainly watch with interest any moves made along this line, and will be pleased to do anything in our power to assist you, and we will consider it a favor if you will keep us posted as to the progress made.

THE RICE WALL PLASTER CO.,  
W. W. BAKER, Pres.

#### New Address.

The Elyria Wood Plaster Co., Elyria, Ohio, have removed their general offices into the Century Building for the sake of greater facility in attending to the wants of their customers. Mr. N. S. Griswold, manager of the company, calls the attention of the trade to the new address. The business of all the company's mills in future will be conducted from the one office and will be connected by both long distance 'phones as well as by wire. The address is, Elyria Wood Plaster Co., Century Building, Elyria, Ohio.

#### Colorado Gypsum.

Larimer County, Colorado, is the largest gypsum produced in the State. The gypsum deposits occur in a basin between rocky ridges. The main quarry is operating on a knoll showing a face of gypsum 250 feet long, and 28 feet high in the middle, thinning to 7 feet at the edges. The gypsum is quite compact and gray in color. The amount of stripping does not exceed 18 inches. The material is blasted out, augur holes being bored to receive the charge of explosive.

A new mill for the manufacture of plaster lath is being erected by the U. S. Gypsum Co., near Culver, Ohio. This material is a composition of pulp and plaster and can be cut to fit any space. It is a substitute for steel or wood laths and is tacked on in sheets.

The Consolidated Wheatland Plaster Co., of Caledonia, N. Y., are adding a new grinding mill with more power to double the capacity of the plant, which now is one hundred and twenty tons of ground rock every day.

The Standard Wall Plaster Co. has been incorporated at Washington, D. C., capital \$50,000.00, by John S. Carter, H. A. Coomer, W. W. Fentress, F. C. Lucas and John B. Collins.

The McCarrell Composition Stone and Stucco Co., has been incorporated at Jacksonville, Fla., with a capital stock of \$10,000.00, to manufacture and deal in building material. The incorporators are: Robert McCarrell, James Ramsey, Robert P. McCarrell and Thomas McCarrell.

Charles T. Blanchard, a stockholder, has been named temporary receiver under a \$50,000.00 bond to administer the affairs of the Adamant Plaster Co., of Syracuse, N. Y. The liabilities of the company are \$90,957.76, and the assets are \$48,492.63.

The General Fireproofing Co., at Youngstown, Ohio, manufacturers of all-steel furniture and filing devices, herringbone expanded steel lath, expanded metal, and contractors for expanded metal fire proofing, are erecting a new 200 ft. building at their works. The outside walls are to be cement plaster laid on herringbone lathing, a type of building that is meeting with greater favor every day for factories as well as dwellings. A largely increased demand for the product of this concern together with a promising outlook for the coming year has made the new buildings necessary.



ST. LOUIS—Continued.

(CONTINUED FROM PAGE 10.)

Co., offices No. 1 Broadway, New York; Mr. W. R. Warren, president of the Virginia Portland Cement Co.; Mr. R. W. Lesley, president of the American Cement Co. Mr. J. C. Robinson, president of the St. Louis Portland Cement Co., was in the chair. The meeting was executive and concerned the carrying out of the important exhibit already referred to.

Lime.

Mr. Ph. J. Dauernheim, of the Charles W. Goetz Lime and Cement Co., reports that company has secured an extensive contract for supplying the city of St. Louis with lime to be used, with sulphate of iron for clarifying the water supply. A fair price has been secured and the contract calls for thousands of tons of lime, but the company will not be "hoggish" in the matter, and other lime manufacturers will participate in the benefits of the contract. Experiments have been conducted by the Board of Public Improvements for some time past and the Goetz Lime and Cement Co. has already supplied something like 1,000 tons of lime to the board during the past thirty days. The contract for the lime was awarded April 22. Since then the supply commissioner has awarded a contract for supplying 2,500 tons of sulphate of iron to the water department. This contract was secured by the American Steel and Wire Co., at 47½ cents per 100 pounds, including delivery at the Chain of Rocks. The supply of sulphate of iron is expected to last a year. Only one bid was received for the iron sulphate. There were three bids for the lime contract.

Enquiry at the offices of the Glencoe Lime and Cement Co. shows that business is satisfactory. What is lacking in the regular trade is, so far as building material goes, made up for in the demands occasioned by the Fair.

Dry Press Brick Machinery.

Across from the office of the Glencoe Lime and Cement Co. are the works and offices of the Fernholtz Brick Machinery Co., so I dropped in to see my friend W. L. Rogers, who is, nominally, only secretary and treasurer, but whose hat covers a general manager of no mean ability. He says that business is quite active. This view of matters is one he may be fairly entitled to take as last week two complete 4-mold dry press outfits were sold. Mr. Rogers is busy getting out a hydraulic press for the sand-lime brick process. The common opinion being that too much pressure can not be used for this process and that the greater the pressure the better the brick—an opinion which I have the presumption not to share. Asking Mr. Rogers what the principal trouble of the trade is at present he replied that it is the possibility of the engineers striking on the expiry of their contract May 20. Last year the strike was for higher wages. That matter was eventually settled by arbitration. This year, if a strike takes place, it will be to prevent the employment of laborers, as helpers of any kind in the machine shop, who are not members of the union. This demand is almost certain to be resisted, and if persisted in the thing will have to be fought out, just as the threatened sympathetic strike of the teamsters will be.

Fire Brick and Sewer Pipe.

At the World's Fair the other day I met Mr. Fred Talbot, superintendent of the Laclede Fire Brick Manufacturing Co., St. Louis, who was directing the erection of the imposing exhibit the company has in the Palace of Manufactures. He says that business during the past month has considerably improved in all branches. Large shipments of sewer pipe have been made to the South and the Northwest. Fire brick is finding a good market just now, also gas retorts, furnace tiles and settings. These goods are being shipped to points as far apart as Canada and Old Mexico, and from New York to San Francisco, besides some to the United States' over-sea possessions. Vitriified paving brick too, another branch of the company's manufacture, is in great demand.

Plaster.

Mr. W. D. Heltzell, representing plaster companies, with offices in the Odd Fellows building, St. Louis, had, when I called last Friday, just returned from a trip covering a portion of Southwestern Illinois. He found that business in that territory had been rather dull, owing to the partial failure of the wheat crop last year. Added to this the weather conditions during the past winter have been unfavorable, but crops are promising well now, which makes the outlook much

better and a number of new buildings are proposed. At Mascoutah, Ill., a hospital is to be erected. This will be quite a large building and will take about two carloads of wall plaster. Morris and Sparta, two lively mining towns, are doing some building. They have a very good quality of coal and consequently are in a prosperous condition. The town of Sparta built over one hundred houses last year.

Prices Increased by World's Fair.

That the prices of many things besides rents are increased by the exceptional conditions brought about by the World's Fair, needs neither argument nor explanation, but I came across an interesting instance the other day while gathering information for ROCK PRODUCTS. This is the price of glue, which has increased from one to five cents per pound in consequence of the large demand for that article by the manufacturers of staff, the material of which the statues, cornices, columns, capitals, and exterior work of the magnificent palaces at Forest Park are made.

CHICAGO TRADE NEWS.

CHICAGO, ILL., April 27.—The inclement weather of the past month has had a deterrent effect upon business, though there has been a decided improvement over the previous month and the outlook is very encouraging for business as soon as good weather sets in, which must be the case very shortly.

A large number of quarries have been gotten into better shape, though, owing to the severe rains of the past week, quite a number are still hampered in their operations by water.

Paving and Sidewalk Improvements.

These will contribute in no slight degree to the general improvement in all lines and a very large amount of work will be done with the first signs of spring.

Assessments have been confirmed and are now under contract for the construction of thirteen miles of plank walks upon fifty-two streets; 57½ miles of cement walks upon 107 streets, and 56 miles of cinder walks upon 224 streets. In addition to these streets, already under contract for sidewalks, assessments have been confirmed and are ready for advertising for the construction of two miles of plank sidewalks upon eight streets; 37½ miles of cement sidewalks upon 141 streets, and 26 miles of cinder sidewalks upon 52 streets. This is far in excess of any sidewalk ever before done by the department.

During the past year 82½ miles or 1,499,041 square yards of paving were constructed of different material at a cost of \$3,817,400, viz.:

	Miles.
Asphalt .....	48.88
Brick .....	7.06
Cedar .....	1.92
Creosoted block .....	.03
Granite .....	3.55
Macadam .....	20.15
Novaculite .....	.28
Rock Asphalt .....	.18

Notwithstanding the large amount of work done last year, it is expected that this year will surpass it, as assessments have been confirmed and are ready for advertising, on 126 streets, which, taken in conjunction with the number of streets that will yet be confirmed so that the work can be completed this year, is almost certain to be the case.

The sewer construction reached the sum of \$343,750.00 and the assessments for drains, water service pipes and water mains were confirmed and improvements amounting to \$150,000.00.

An important improvement is one designed to drain about 5,500 acres lying south of Eighty-seventh Street, known as the "Ninety-fifth Street system," for which plans have been prepared and an estimate made and the roll is now being spread. This system of sewers is estimated to cost \$745,000.00.

There is much dissatisfaction amongst limestone men at the action of Mayor Harrison in vetoing an ordinance designed to place limestone screenings upon the same footing as torpedo sand in regard to sidewalk construction.

NEWSY INTERVIEWS.

Mahan & Co., 1116 Chamber of Commerce building, report their new plant at Bloomington, Ind., just finished and running full time—the bad weather has been responsible for considerable slackness up till a month ago and has put them away be-

hind in their quarrying operations, but the past month things have been much better in every way and the outlook is excellent.

The Wisconsin Lime and Cement Co., 605 Chamber of Commerce building, report business picking up nicely and very fair prospects, though for two or three months there has been practically nothing doing.

B. E. Ladow, who has had an office in the Chamber of Commerce building, is moving to Kansas City, Mo., and will close his office here.

F. E. Brown & Co., 806 Chamber of Commerce building, say business is very good and the outlook is very encouraging. The labor troubles between the cement finishers and helpers and the manufacturers, have been settled for a year if nothing develops in the way of a strike of the teamsters. The situation looks excellent, considering it is presidential year. Lots of work is being figured on and at better prices than prevailed last year.

The S. S. Kimball Brick Co., 304 Chamber of Commerce building, are looking for the season to open up briskly when the weather has moderated. Amongst the larger of the jobs they are furnishing brick for is the Ryerson building, corner of Adams Street and the river, which will take about 350,000 faced brick. They are also furnishing the brick for the new factory building of the U. S. Envelope Co., at North Chicago, which will take 200,000; a schoolhouse at De Kalb, Ill., 120,000; the Rialto building which is being remodeled, will have two additional stories for the use of the Postal Telegraph Cable Co., will take 120,000. They have just finished a new addition to the Normal school at Englewood, which took 200,000; the work for the asylum at Dunning which took 150,000.

The Illinois Brick Co., 915 Chamber of Commerce building, say, in spite of the customary depression in a presidential year, the demand for brick will compare favorably with recent years. Nor does the fact that the price of brick delivered in Chicago has been raised to a figure substantially in advance of what it was last year seem to abate the demand. Large sales are made from day to day for future delivery, because the producers have made up their mind that the present prices have come to stay. Brick are being sold on quotations of \$8.00 per 1,000 delivered at buildings by teams in Chicago, and a 10 per cent discount is granted to all who pay on or before the 10th of the month, for material delivered during the previous month, thereby reducing the price from \$7.50 net to \$7.20 to the prompt customer. This is done both in the interest of the builder who has sufficient financial ability and business training to be prompt, and the producer, and can not help but work beneficially in eliminating the careless and improvident in course of time. The consumption of Chicago brick in the country throughout Illinois, Northern Missouri, Iowa, Wisconsin and certain points in Michigan that can be reached is most encouraging. The Illinois Brick Co. sells about 400,000,000 brick per year and fully expects to market the same amount this year. They control twenty-one brick yards in active operation, all connecting with the trunk lines leaving Chicago, thereby insuring prompt delivery and their being able to take care of any size order.

The lowest stock they keep on hand is 40,000,000 brick and it varies from this figure up to 100,000,000.

The Chicago Fire Brick Co., 518 Chamber of Commerce building, report business as having been rather poor the last few months, owing to the lateness of the season, but at the present time orders are coming in nicely and they anticipate a brisk trade.

The American Lime-Sand Brick Co. are now comfortably located in their new offices at suite 1309 Great Northern building. Manager John J. Moroney says they have ten plants in course of construction in different parts of the country and the outlook for business is excellent. This firm also operates the Chicago Brick Machinery Co. and while the clay business has been slack the sand and lime business has been very good.

The Western Stone Co., 320 Chamber of Commerce building, operate quarries at Lemont and Joliet, Ill. The past few months, owing to the bad weather, trade has been rather slow but the rush will begin now that nice weather has opened up.

The cost of supplies and the demands of labor increase all the time. In the past two years labor has increased 30 per cent. and supplies 46 per cent., an average increase of 38 per cent., and all the increase in the price of stone has been 23 per cent. So while the price of stone seems high the pro-

ducers are in reality getting 15 per cent. less than formerly, and with no certainty of labor not demanding a further increase.

The Portage Entry Quarries Co., 501 Chamber of Commerce building, report business good. Amongst other jobs they are furnishing 20,000 feet of Port Wing brown stone for St. Agatha's church. Find business good though it might be better, but this is due to the backwardness of the season. They have a number of orders on hand and expect to obtain their share of new business.

The Young Stone Co., of 305 Chamber of Commerce building, report business good last month, and with no disturbing element in the way of labor troubles, likely to remain so. They dispose of their stone around the neighborhood of Chicago.

The Acme-Bedford Stone Co., John Rawle, manager, 507 Chamber of Commerce building, operate quarries at Bloomington, Ind. They ship stone all over the United States. Their principal product is block stone, mill dressed stone and cut stone. One of the contracts they have on hand is for Uncle Sam for twelve hospital buildings at Washington, D. C. Each building is about 1250 feet round, so it made in the neighborhood of 15,000 lineal feet for each course of stone. Also the administration building for the above hospitals; the Tower addition also at Washington, D. C., and the homeopathic hospital building, to be completed this week. All for the same general contractors, Horton & Hemenway, of Providence, R. I. They have just completed a very nice bank building at Rockwell City, Iowa, and are now doing a fine residence at Iowa Falls, Iowa, and a large mausoleum at Winona, Minn. Amongst others was a bank building at Lowell, Ind., and the soldiers' monument at Bloomington, Ind., this stone being selected by Mr. Perry, formerly president of the Perry-Matthews-Buskirk Co.

The American Sand and Gravel Co., 308 Chamber of Commerce building, report business very good considering the lateness of the season, with a good outlook. They deal entirely in sand and gravel.

#### MINNEAPOLIS NOTES.

MINNEAPOLIS, MINN., April 30.—The brick business starts off well, although the season is very late. All the yards at Menomonie have started up on full time. The Hydraulic Press Brick Co. has already booked some large orders, among which are the Parke, Davis & Co., building; the McMillan flats; the Fifield & Ingham flats; the Pabst flats; the Orpheum theater in Minneapolis, and the Y. M. C. A. building at Mankato, Minn. The Wisconsin Red Pressed Brick Co. will, besides other orders, furnish 1,500,000 sewer brick for the Minneapolis sewer work this season. All the yards at Minneapolis, Princeton, Mankato and Chaska have started up for the season's run. Riedele & Caspers, of Chaska, have contracted to ship 1,000,000 of their brick to Winnipeg, Man., for use in the Union Bank, of Canada, building.

The Thief River Falls Stone and Cement Co. has been formed at Thief River Falls, Minn., in the Northwestern part of the State, by F. H. Feasel and John Krehl, of Kiester, Minn., and A. C. Hanson, of Thief River Falls. They will construct a cement brick industry and expect to start with a daily output of 6,000 and to increase it as the business develops to 20,000.

The U. S. Gypsum Co. has some fine roofing gravel and sand at the South St. Paul plant, which is being offered at a price which makes it a snap, for immediate delivery. Intending buyers must hurry, though, for it won't last long.

George D. Taylor, of St. Paul, a wholesale dealer of glassware and woodenware, has had plans made by Mark Fitzpatrick, for a handsome residence of pressed brick and cut stone, to cost \$30,000.00. It will be located on Summit Avenue, the swell residence street of the city, and will be a fine one.

The Superior (Wis.) Crushed Stone Co. has recently placed contracts for a stone crusher to be located at Longmont, a short distance from the city. The crusher is to be located at the quarry so no time will be lost in getting stone to the crusher. They expect to be able to furnish crushed stone at once.

The Western Granite Co., of St. Cloud, Minn., recently took several large orders for crushed granite from the leading contractors of St. Paul, Minneapolis and Duluth.

The Sullivan Monument Co., of Minneapolis, will start work soon on the construction of a large and elaborate mausoleum at Winona, Minn.,

for the Crockett estate. It will be of Bedford cut stone, St. Cloud granite and polished granite from Jasper, Minn. They also have a contract for a handsome granite monument of Westerly, R. I., granite, for the Prentice estate at Cleveland, Ohio.

J. D. Tann & Co., of Princeton, Minn., propose to launch upon the artificial stone business in that town.

The Montana Building Block Co., of Havre, Mont., have buildings completed and machinery on the way for a hollow concrete block plant.

A warehouse is to be built at Watertown, S. D., requiring 2,000 cement blocks. The Cement Block and Sidewalk Co., of Brookings, S. D., furnished them.

George Seavey, of Cedar Falls, Iowa, has machinery ordered for a concrete block plant.

Russell Bros., of Waverly, Iowa, have arranged for the rights to use the Miracle hollow block for Bremer and Butler Counties, Iowa.

W. D. Rowe, of Crookston, Minn., is arranging for a concrete block plant.

Gandy & Ladd, of Webster, S. D., have engaged in the cement block business.

Godby & McWherter have added cement block production to their cement works at Jamestown, N. D.

Litchfield, Minn., will soon have a hollow block plant.

W. P. Alsip, a leading brick manufacturer of Winnipeg, Man., and also interested in Grand Forks, N. D., has an order for 7,000,000 in the former city. He will put in another yard in Winnipeg to take care of his regular trade.

A sand-lime brick plant is proposed at Oshkosh, Wis., by J. H. Kiel and others.

The Minneapolis Brick and Tile Co. has been formed in Minneapolis, and has taken over the Higgins yard, as well as the yards of the Terra Cotta Brick Co., at Grantsburg, Wis. The latter plant will be operated but raw clays will also be shipped to Minneapolis, for pottery, tile and brick.

Among the leaders of the stone industry in Minneapolis may be mentioned the plant of the Langdon Stone Co., which has the largest and most complete crushing plant in the city and the Northwest. They have a plant composed of a tandem of Nos. 5 and 3 Gates crushers, equipped to do away with manual labor as far as possible. The stone is not touched by hand after being loaded at the quarry into the dump cars. It is hauled to the crusher with a friction hoist and there automatically dumped, reaching the No. 5 crusher first. Passing through that crusher it goes up in elevator buckets 52 feet to a revolving screen, 3 feet 4 inches by 14 feet in size. This thoroughly sorts the rock and what is too large for the screen is sent to the No. 3 crusher and reduced to the proper size, when it is returned to the screen. Beneath the screen the bins are located and the various sized stone are distributed, each going to its own size bin by gravity. The bins are adjacent to a railroad track and a road, so that it is possible to load either a wagon or a railroad car by gravity. A wagon can be loaded in one minute with four cubic yards, and a 30-ton capacity car can be filled in three and a half minutes. They load 2,500 pounds of stone for a cubic yard.

The famous pipestone mantel with the prehistoric Indian hieroglyphics, found near Pipestone, Minn., has been shipped to the St. Louis Exposition. They are on exhibition in the mining division of the Minnesota building. There is also a sample of building stone from Pipestone County, formerly shown on the new capitol grounds in St. Paul. Accompanying the mantel is a large Jasper hearthstone, which was shown at the Chicago exposition and at the Pan-American at Buffalo. This is to be the last exhibition of the mantel, for it is soon to be installed in an historical room to be fitted up in the courthouse at Pipestone.

M. R. Wilcox, of Minneapolis, has let contracts for the erection of a cement hollow block residence at 3334 Calhoun Boulevard, overlooking Lake Calhoun. It will cost \$7,000.00.

The Landers-Morrison-Christensen Co., of Minneapolis, will furnish Columbus (Ohio) pressed brick and terra cotta for a handsome modern bank building to be erected at Red Wing, Minn., this summer for the Goodhue County bank. The same firm has sold Columbus pressed brick and St. Louis terra cotta for the Ross public library building to be erected at Blue Earth, Minn.

Jones & Hartley, of Minneapolis, cut stone contractors, have some good contracts on hand and are running their saw mill and planer full time.

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They expect to have the carving work in the Georgia marble front of the Northwestern National Bank building completed next month.

W. C. Wyckoff, 302 Kasota block, has been made sales agent for the Rockville Granite Co., of Rockville, Minn. They are opening up some fine granite for both building and monumental work. They are furnishing the foundation granite for a large monument to be erected this spring by the M. J. Sullivan Monumental Co.

H. H. Whetmore, of the Lumber Exchange building, Minneapolis, has recently patented a stone surfacing machine which he will place upon the market. The device is a power plant and it is claimed that it will do the work better and more accurately than any machine yet offered on the market.

#### EDITORIAL CHAT.

##### Sugar Off Again, Please.

Barre has a city clerk who is "par excellence." He is better known, however, by the readers of ROCK PRODUCTS' family as a leader in the granite business, and after that secretary of the Granite Manufacturers' Association. It has been some time since we have seen this gentleman, but evidently he has not forgotten us, for lo and behold! we heard of his being at the sugar camp of one of his friends and he did not forget his "Old Kentucky Home Far Away," for it was not many days after that a box of sugar and syrup arrived. Now that is a man "after me own heart." We have flap jacks for breakfast every morning and if indigestion should break out, why the paper might not be more than sixty-four pages this month.

Speaking of the last ROCK PRODUCTS, Mr. McKay said, "That was a nice sheet you had in April. ROCK PRODUCTS is bound to win."

##### Quantity Desirable.

It is not often you see very good records in stone crushing, but I am reminded of an old record on a Gates' crusher down in my old home in Pennsylvania, where the plant crushed a hundred and seventy-five tons an hour for fourteen consecutive months on fluxing stone. It was brought down from the mountain tops in cars, and the train crews had all the trouble they wanted in order to haul out all the product of this crushing plant from day to day and furnish them cars. While quantity is not the only desirable point in working stone, still when you have a big plant and a good many people around, the more stone you can get out, the less it costs per ton or yard, and you don't see the railroad or furnace people making any big concession in prices to allow the stone man to make a big profit. Therefore applying the most modern machinery and securing the most modern and best system of production to get the most out of it, aids the situation materially.

##### An Expensive Paper Weight.

The history of the story of starting a Portland cement plant some years ago makes an interesting tale. The hero of this tale is Mr. Ralph Gates, secretary of the Chicago Portland Cement Co., Chicago Stock Exchange Building, Chicago, Ill. On his desk you will find a \$40,000.00 paper weight, composed of the nails and other remains of a \$40,000.00 plant which was built with the idea of securing clinkers from the other side for operating, but the grim monster, Fire, took a hand in the proposition and after two fires the splendid plant of the Chicago Portland Cement Co. is the result with Mr. Norman D. Fraser, president.

C. M. Camm, of the American Portland Cement Co., Philadelphia, Pa., visited Louisville recently.

Charles Walters, vice president of the P.-M.-B. Stone Co., Chicago and Bedford, has been visiting in Ohio the past week.

W. N. Thornburg, vice president of the Ohio Quarries Co., has established his office at 190 Euclid Avenue, Cleveland, Ohio, which will be his address in the future.

Mr. Ervin Dryer has accepted an appointment with the Allis-Chalmers Co., Chicago, Ill., and he will give his attention to the sale of their engine work as well as that of the Bullock electrical apparatus, the line of machinery recently acquired of the Bullock Electrical Manufacturing Co., Cincinnati, Ohio.



# Quarries.

## The National Quarry Owners' Association.

D. McL. McKAY, Chicago, Ill. .... President  
W. H. WALLACE, Bay Port, Mich. .... First Vice President  
F. A. BROWN, Aberdeen, S. D. .... Second Vice President  
S. M. HALL, Bucyrus, Ohio. .... Third Vice President  
E. H. DEFEBAUGH, Louisville, Ky. .... Secretary-Treasurer

Official Organ, ROCK PRODUCTS.

### BEDFORD, INDIANA.

BEDFORD, IND., April 27.—At the great center of the Oolitic belt the trade conditions are by no means what they ought to be at this period of an average year. The spring has opened very late and the quarries are more than a month behind in getting into operation, with the mills running steadily on the stored stone of last year's product, using up all the available supply on jobs which were begun last season and now nearing completion, with an outlook for the season which will not be very busy to the building trades.

The Bedford Quarries Co., with their enormous capacity are doing a good business with full force at work in their quarries as well as at their mills, which were run nearly all winter.

Mr. C. S. Norton reports his quarry interests as slowly opening up, but with plenty of prospects to make a good season if the weather conditions will permit.

#### Two New Quarries.

Over in Dark Hollow where so much of the finest Bedford stone has been found George Doyle & Co. have their quarry well under way with a full force of hands, and Captain D. McL. McKay was on hand in a very happy frame of mind, which by the way, is now an unusual condition with him, viewing the new quarry of the Consolidated Co. just being opened up. At the close of last season the new quarry was exploited a couple of floors, and Captain McKay is now taking out some very excellent buff stone of the New York grade. His company have very large holdings, and it may be said that this new quarry taps an almost inexhaustible supply. It will be worked quite extensively this season, as the entire output is already under contract.

Just across the ravine the Furst & Kerber Co., are opening up a new quarry in a business like manner. Said Mr. Henry Furst, Jr.: "We have had no core drillers, nor experts to advise us. We have employed Mr. William Fultz, a well known quarryman, of wide experience, to manage the new quarry, and they have been stripping for the last ten days. We don't know what the bosom of the earth contains, but we will operate a quarry this season anyway for what we can find in our large holdings." This property is immediately adjoining the well-known Doyle quarry. They will put in two Sullivan channelers at the start, and have purchased a 40 h. p. engine and 60 h. p. boiler. They are also just putting in a track to reach the quarry. This firm operate very extensively in cut stone, and kept their plant running all through the winter, but just now the demand seems to be a little slow. This enterprising firm have the various parts of a large job piled up in their yards now awaiting shipping orders, which are held back by reason of the slowness of some of the other contractors, but they expect business to move along briskly as soon as it gets started.

Mr. Ed Thornton, of the Bedford Steam Stone Works says that they were busy all winter cutting up last year's stock. They have a number of small jobs on hand, and a magnificent stock of stone. They operate their own quarry, which is now running full blast, and report business and prospects a little dull.

The Cleveland Stone Co. have bought the enormous P-M-B quarries and milling interests, although it will be a long time before any one in Bedford learns to say anything else than the P-M-B. This company will operate all the quarries and mills under the same management which has been so successful under the old firm name. Having a huge accumulation of delayed business

to begin with there can be seen nothing except a rushing season ahead.

The Indiana-Bedford Stone Co. is running their quarries at full blast with a fine supply of orders and very flattering prospects for a good season's business.

John A. Rowe, the well-known stone contractor, has been running his mills all winter. They have



GEORGE DUGAN, BEDFORD, IND.

plenty of stone on hand. Have just finished a fine job for the Federal Post Office Building being erected at Waterbury, Conn. The last one of 33 cars loaded with very beautiful carved work in buff stone for this post office was just ready to leave the yards.

#### Brick Business—Increased Capacity.

They also have two big jobs in New York City and a nice Federal Post Office Building at Greenville, Tenn. They have about 80 carloads of stone now in the yard to be gotten out, and figuring on a number of other jobs. Mr. Rowe said, "We have recently increased the capacity of the plant, by putting in a 75 h. p. Atlas engine and adding another planer of the New Albany pattern, making three in operation at present. Speaking of his monument department Mr. Rowe said: "Trade this year in the monument line has been about as it was last year. Have about 55 men at work on different kinds of our class of work. We are very



Carved Stone Capitol, Main Art Building, 5 1/2 feet square, 5 feet high.

near on time with all of our orders, and have had an exceptional year on Woodmen monuments. We make it a point to have some on hand so as to be able to ship at once. Our goods are going into every State in the Union. We are shipping to Massachusetts and Connecticut and as far West as California. Have made quite a number of soldiers' monuments."

#### Dugan Conquers Strikes.

Mr. George Dugan, the cut stone contractor, has just completed the Main Art Building at the St. Louis Fair, which is the only permanent building of the whole Exposition. The three fronts are entirely of stone, but the rear elevation is of brick. Although a very small amount of brick-work is visible, there are more than 12,000,000 brick used in the building, which is very ornamental and of exquisite design, by Cass Gilbert, architect, of New York. A great deal of the carving was done by hand, and the building is worthy to stand as the permanent example of American effort at the beginning of the Twentieth Century. Mr. Dugan reports business quite dull at the present time owing to the completion of this big job upon which he has centered all his efforts for the past seven months, and completing his building "on time." He was engaged in a little mathematical problem, which may be tersely explained to show just how busy he has been with his World's Fair contract. The contract was begun upon a seven months' time limit with a forfeit of \$500.00 a day if found incomplete at the expiration of the seven months, and a stipulation requiring union labor only. As soon as the contract was signed the Bedford strike became operative and continued for two months, then when the stone was shipped to St. Louis another strike was inaugurated by all the building trades which lasted four months, and one-third of the job was done while the strike was on. Seven months was quite small enough for the period of time to undertake such a job, but with six months' strikes on his hand Mr. Dugan found himself really "busy." He is a resourceful man of large working capacity. Finding workmen in Chicago, New York, or wheresoever the union stone cutter could be found, he plugged away at the job day by day with an indefatigable resolve to land it on time, and was one of the few contractors who succeeded. Mr. Dugan says there is plenty of work in the country, and he will go after his share of it after a little rest.

The quarries of the Oolitic Stone Co. of Indiana are opening up with a nice supply of orders and with prospects for a fair season's business. While we failed to see Mr. Reed, the office manager, Mr. Holcomb received us very kindly, occupying box seats while the Quakers gave a medicine performance outside.

William Bradley & Sons, mammoth establishment, of which Mr. Michael Wallner is general superintendent, are working steadily on the big Indianapolis Federal Building, now nearing completion. This firm also has a contract for the Cleveland Federal Building, which assures a busy season for them. Mr. Wallner, who was very kind in showing us about the plant, among other things of interest pointed out the Diamond circular saw recently invented by W. F. Myers, of Brooklyn, N. Y., and developed and perfected by Mr. Wallner, who is the Western agent for its manufacture and sale. The one in operation at the Bradley plant is the first ever built.

#### The New Circular Stone Saw.

In appearance it very much resembles any old fashioned circular saw, having a disc 76 inches in diameter of steel made by Henry Disston & Sons, Philadelphia, Pa., and so dished that a speed of 450 revolutions a minute by centrifugal force will make a straight cutting line. In the sawing circle of the disc are set 100 teeth, each tooth armed with a diamond. The tooth consists of a plain lug inserted into the saw with a diamond driven into position, all the teeth being interchangeable. The cull diamonds cost about \$5.00 a carat and \$500.00 worth of diamonds will arm the saw for about two months' steady cutting of ten hours per day without the least wear upon the disc in any way. The stone is placed on a sawing table adjustable to the proper position for cutting. The saw is speeded up and applied by means of an automatic regulating apparatus and requiring 10 h. p. to operate the whole machine. The arrangement of the sawing table is such that with two cuts a square piece can be taken out of the end of a piece of stone without injury to any other part. Mr. Wallner explains that this is the only machine yet invented which does an absolute job, sawing through planed columns without the slightest chipping or lopping off at the fluted edges. The output of this machine is something prodigious. It makes a 13-inch cut every minute through stone two and one half feet thick, but the speed can be varied all the way down to 3 inches a minute. The diamonds for a day are estimated to cost only about \$2.00, and the profit on a day's run as compared with any other method is easy to be seen in the prodigious pile of perfectly finished work.

**Increased Capacity.**

John Naugle, the well-known monument manufacturer, who has done quite a good deal toward introducing and using Bedford stone for monumental purposes reports business for this season opening up pretty slowly. However, this may be accounted for by the fact that he has largely increased his capacity recently by the introduction of pneumatic hammers. He makes a specialty of Woodmen's monuments and other rustic work, which come out of the local stone to perfection. While business is not coming as fast as he would like to see it, there is every indication that this work is appreciated and no doubt his increased capacity will account for most of the seeming slackness.

**Machinery People Busy.**

The Bedford Foundry and Machine Co., of which Mr. Ed Sohn is general manager and Mr. Chas. Gonder is superintendent, report that they are full of repair work to take care of the quarries which have been starting up for the past few weeks, and their foundry orders are plentiful. They have put in a new lathe of enormous proportions, a new planer, but still they haven't enough capacity by half. They are making the power and derrick apparatus for the new Furst & Kerber quarry over at Dark Hollow, and are very busy with a world of little jobs and orders.

**BLOOMINGTON, INDIANA.**

BLOOMINGTON, IND., April 26.—The stone industry in the quarries of Monroe County around about Bloomington are just about started for the work of the season. All the stored and seasoned stone taken out last fall has been used up by the winter's run of the mills, and they are now cutting the first of this season's product. By reason of the continued cold weather, which has been followed by almost incessant rain, the work at the quarries has been delayed fully a month, and now each and every quarryman in the district is attacking the quarries with redoubled energy.

Here lives a man known in the business world as Mr. William T. Blair, but if he is hailed by any other name than "Billy Blair," he will look around and see if you are speaking to someone else. He is a man of versatile talents and considerable attainments as well as very wide local experience, and is the able superintendent at the mills of the Central Oolitic Stone Co., which saws a large part of the product of the combined quarries known as the Star, Hunter Valley, Mathers and the Perry Bros. Of all of those companies, Mr. W. W. Wicks is president, Henry A. Woolery, manager, and as clever a man as ever talked stone, D. K. Miers, is at the head of the office. The mill will soon be running night and day as Mr. Miers explained, they have plenty of work and orders in sight to keep moving steadily along.

**The World's Fair Exhibit.**

In a pleasant interview with Mr. Wicks, who is the World's Fair Commissioner of the Second Indiana District to represent the Oolitic stone industry, he showed the plans of the now almost completed exhibit being erected in the Palace of Mines and Metallurgy. The exhibit is by the State of Indiana, and represents the whole district producing what is popularly known as Bedford stone, being partly of buff and partly of blue, and every company operating quarries both at Bedford and Bloomington have been invited to participate with samples of their products.

The exhibit will consist of a rectangle 30x40 feet with a noble arch entrance and surrounded by a balustrade in sections, each constructed of a different pattern as well as a different sample of stone. There are Corinthian columns, vases and other carved and polished work to display the various qualifications of the material. In the center of the rectangle will be placed a center table which consists of a single slab of blue Bedford stone 5 feet wide by 15 feet long and 6 inches thick, and rests on six supporting legs of turned work and finished so as to make a very imposing as well as artistic whole.

The table is the handiwork of Mr. A. J. Thompson, the well-known stone contractor, of Bloomington, who may well be proud of such a splendid sample of his workmanship, and was made at the mill of the Central Oolitic Stone Co.

The top of the table will be divided into sections, one of each quarry in the district, where each will place its own special and separate exhibit, thus

putting upon the surface of the mammoth table a very comprehensive exhibit of the products of Bedford stone. Mr. Thomas W. Simmons, of Bloomington, a very accomplished and affable young gentleman will be in charge of the exhibit at the World's Fair.

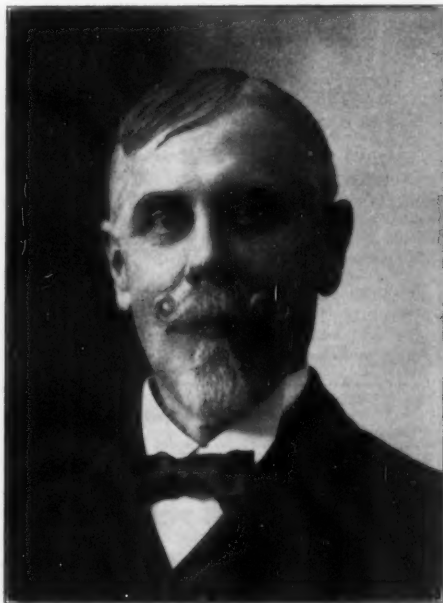
**Many Sided Man.**

Mr. W. W. Wicks is also proprietor of the Beehive Department Store, which he calls his "first love," and enjoys the distinction of being the leading merchant of his town for a period of 27 years continuously. The Beehive is really a very extensive and up-to-date establishment, and Mr. Wicks is the busiest man in Bloomington, and yet he has time to take care of all his duties as a world's fair commissioner, and has a pleasant word with every one he meets, and in the evening there is no one who enjoys a little game of cards, just for fun and social chat, more than this leading merchant, quarry and stone promoter, commissioner and public spirited citizen.

Billy Blair has an interesting piece of work on hand for Wolf & Co., of Mansfield, Ohio. It consists of a vault entirely of stone. The roof will be made of two pieces of stone each 5 feet 5 inches by 17 ft. long beveled in such a manner as to take a third piece of stone at the ridge in the shape of a keystone. The side elevations will consist of a single stone 7 feet 9 inches by 17 feet. The front elevation will have turned pillars with carved capitals, and two stone doors swinging from the pillars on each side. It will all be of rough faced work and of classic pattern.

**Opening New Quarry.**

Mr. W. S. Hooper is secretary of the Eagle Stone Co., who are opening up a new quarry in the coun-



W. W. WICKS, BLOOMINGTON, IND.

try South of Bloomington on the property known as the old No. 7. In their quarry is found a fine supply of water, which flows by a syphon 20 feet high. They have put in a 40 h. p. McAlfrey engine and a 60 h. p. boiler, derricks and implements and are just about ready to begin operations. Mr. Hooper has some very fine samples of stone taken from his quarry, and expects to be in full operation in 30 days, and ready to market the product.

The Buff & Blue Oolitic Stone Co., located about nine miles southwest of Bloomington, are taking out some fine mill blocks, but as Mr. F. C. Raff, the general manager, said, "We are merely prospecting, and find that we have good stone and plenty of it." The Olivers, of South Bend, Ind., are interested in this concern. Their postoffice is Victor, Ind., and Mr. Raff is not sure he will operate the quarry during the entire season.

The National Stone Co. have erected a new mill of six gangs at their quarry, which with the old mill, gives a capacity of 12 gangs all in active operation. Mr. S. E. Freese was not at the plant, having gone to Detroit more than a week ago, but Mr. Fred Franks, the superintendent, explained

**Write ROCK PRODUCTS advertisers when wanting machinery or supplies.**

that they had used up all of the stock that was stored last fall, and are now beginning to cut this season's product of the quarry, and are running close up to the derricks.

The United States Quarries Co. were running six channelers and getting out some very fine ash-lars of what is known as the New York grade of buff stone, loading them directly on the cars from the derricks. Mr. O. M. Fulwider is a man of versatile talents and is investing largely in the fruit business near Victor, besides his quarrying interests which he is pushing enthusiastically. At present they are short of drills and their smith shop is the loudest place about Bloomington, to say nothing of the sparks. They are getting out large shipments daily to New York, Chicago and Milwaukee, doing the same thriving business so often reported in this paper.

Mr. T. J. Loudon, of the Monarch Stone Co., says they are getting out some excellent buff stone at their quarry in this same locality. They have good stone and plenty of it, and have erected a new mill at their quarry, which they are pushing to utmost capacity in both departments. Mr. Loudon says there is plenty of work in the country, and they expect to do a big season's business.

The Monroe County Stone Co., owned by the Adams Bros., operate perhaps the largest quarry in this immediate neighborhood. They are the pioneers of the quarry business at Bloomington and hold their operations steadily at the front. Their quarry is splendidly equipped with every kind of labor saving device, tool and machine that can be found anywhere.

**The Mistake of the Fathers.**

With all the quarries surrounding Bloomington at the present time it seems hardly possible that the stone for the Monroe County courthouse, built many years ago, was hauled nine miles by wagon to Bloomington, and then the fathers had to blast better stone away to make room for the foundation. In fact, the courthouse stands on a plot of ground which would make an excellent quarry, fine stone cropping out in plain view just beside the walls.

The Diamond and Crown quarries have also begun operations; in fact, the whole district south of the town is taking on a busy aspect.

The South Side Stone Co. have a splendid mill at Bloomington, which is operated by Jos. H. Campbell, president and actuary, who is also the county clerk, a very pleasant fellow and an able business man. He issues all the marriage licenses with a smile that never comes off, and is prepared to talk stone mills and quarries at the same time. Indeed, there is a cordiality about the Bloomington people that is very pleasant for a stranger to meet up with. In fact, there is no way to feel strange, or to be a stranger among this town full of clever people.

**The North Quarries.**

One of the pleasant drives out of Bloomington is that to the North quarries, only a couple of miles out of town.

At the Consolidated Stone Co.'s quarry Mr. Sam Beaumont, the superintendent was very busy getting his full force of hands organized at the quarry, where they are lifting enormous pieces of buff stone out of a hole half full of water which were loaded directly upon the car to be sent to the mill, a short distance down into the valley. This company also operates very extensive mills where they saw, plane and turn stone into various shapes for different purposes. Mr. Wheeler is the superintendent at the mill and says they run nearly all winter, using up the accumulated stone of last fall's quarrying, so that now they are compelled to work on the product of the present season.

The Hunter Valley Quarries were busy loading a train of cars, and the Crescent Stone Co., whose quarry is located on the same track are busy operating at their quarries. They seem to be accumulating a large pile of 4x9 building stone.

**Big Derrick Sticks.**

At the quarry of Hunter Bros., Mr. John A. Hunter was personally directing the work. He has erected a magnificent new mill which is now in full operation with plenty of power and equipped with electric lights and every up-to-date appliance and improvement. Mr. Hunter has a couple of "derrick sticks," as he calls them, to go into a new derrick soon to be erected. The mast is of planed Oregon pine and measures 81 ft. 7 in. in length, 26 in. square at the base, 21 in. square at the top, straight and very clear. The stick for the boom is 73 ft. long and will probably make the largest derrick in any of the quarries in the whole Bedford district.



**The Monumental Feature.**

In reviewing the quarries, mills and the stone interests generally of Bloomington same would not be complete without the mention of the monument phases of this excellent material. Although Bedford stone is little known in the monument industry, yet it is an excellent material, superior in many ways to some of the imported marbles and those materials better known to the monument trades of the country. It possesses two valuable qualifications, one of which is, it will withstand the ravages of time in our climate perhaps better than any other stone, and it is susceptible of a splendid and lasting polish. Again it works very easy under tools of the carver, making it much cheaper in most cases than any other material.

Messrs. Carpenter & Brown are a representative monument firm. They have an excellent plant equipped with pneumatic tools and other modern appliances, a large shed with good light where they are working night and day. Eight expert cutters are employed on jobs which have to be finished by Decoration Day. They are needing three more carvers very badly; in fact, they will employ all the good hands they can get at the present time, and they have first class situations for a couple of reliable men. Carpenter & Brown are quite an enterprising firm, doing a large out-of-town business, having shipped monuments to various parts of Indiana, Ohio, Kentucky, Illinois and Missouri. Last season they erected what is perhaps the finest monument in Johnson County to the memory of Senator J. J. Moore, at Tarralga, at the cost of something more than \$2,000.00. Space forbids our saying more of the excellent prospects enjoyed by Carpenter & Brown, but we will have more about them at some future time.

At the new monument shop of Currie & Son, Mr. John Currie was busy preparing a number of 6-inch sample cubes for the United States Stone Co. to go into the World's Fair exhibit. Each of the six sides of the cubes will be finished in a different manner, to-wit: polished, rough, rough dressed, sanded, bush-axed, pitch-face. The firm works up a great deal of the local stone, and do quite an extensive business. They report the spring business as being very dull, but orders picking up right along, so that a brisk business is anticipated by Decoration Day. Mr. Currie has a young son who has rare talent as a sculptor. We hope at some future time to be able to illustrate in these columns samples of his genius.

**Big Contract.**

PRINCETON, Mo., March 22.—We have a contract with the Chicago Rock Island & Pacific Railway for half million yards of ballast and expect to increase this to one million yards. The firm is composed of H. M. Dalton, formerly of Hopkinsville, Ky., who is also general manager of the H. M. Dalton Stone Co., of Hopkinsville, Ky., and Mr. C. P. White of Boonville, Ind., who is president of the H. M. Dalton Stone Co., of Hopkinsville.

Best wishes to ROCK PRODUCTS.

DALTON & WHITE.

George S. Bull, at Monroe, N. Y., will open a limestone quarry on his farm soon.

The Mason's Island quarry, near New London, Conn., began active operations recently. Quite a large gang is employed there.

Operations at the Bellevue quarry, just over the Delaware State line from Chester, Pa., have been resumed after being shut down for several months.

The Warsaw Blue Stone Co. have started work at their quarry at Gainesville, N. Y., and are meeting with many difficulties by reason of the inclement weather.

A new crusher is being constructed for the new quarry at Lemont, Ill. The old quarry began operations to-day after being closed down during the winter months.

Blood & Ransom, Cody, Wyoming, have a contract for the red sandstone to go into the front of the new bank building which is being erected by L. Boudett, at Butte, Mont.

Alfred Boock and Fred Nagel, members of the firm of F. Nagel & Co., New Ulm, Minn., are making arrangements to open up a new stone quarry this summer east of that place.

The preparation of grounds for the New York custom house will be delayed by the strike of quarrymen employed at the Booth Bros. and Hurricane Isle Granite Co., at Rockland, Me.

Cyrus Worlock, Perryville, N. Y., has started operations in the stone quarry.

Queenston Quarry Co., St. David's, Ontario, Canada.—We have opened operations in our limestone quarry with good prospects ahead.

A. M. Goldish, LaCrosse, Wis., owner of the Black Falls Quarries, has purchased machinery with which to work his quarries at an increased output.

William Katterjohn, a well known contractor with quarries at Cedar Bluff, near Princeton, Ky., is making preparations to install compressed air machines.

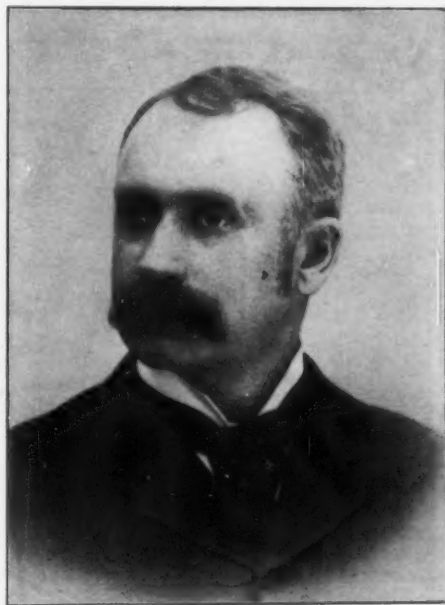
The Massachusetts Broken Stone Co., Greenfield, Mass., will open up a traprock quarry near East Deerfield. They have several drills now at work on the top of the ledge.

The Plainville, Conn., quarrying business is rushing at present. Big shipments of crushed rock are being made to New York to be used in the subway. One day recently thirty carloads were shipped.

William Mitchell, of Mankato, Minn., has leased the Mankato Stone Quarry and will change the name to the Mitchell Stone Quarry. He will get out large quantities of building dimension stone.

Articles of incorporation have been filed by the Linwood Quarries Co., at Davenport, Iowa, by P. F. McCarthy, John P. Crowley and Daniel G. Weatherly with a capital stock of \$10,000.00. They will install a stone crusher to make road material.

E. O. Fulmer, Beaver, Col.—Our quarry is under lease to the Denver & Rio Grande Railroad Co. All the rock that is taken out is lime rock for riprap on their road. About five hundred cars were



GEORGE E. SMITH.

taken out last season, but operations have not commenced this year.

The Booth stone quarries, comprising some eighteen acres of stone land in the southwest part of Alexandria, Ind., have been sold to Mr. F. K. Sawyer, of St. Louis, but it is understood that it has really passed into the hands of the American Insulating Material Co.

James Andrews, of Baltimore, has opened a red sandstone quarries located at Seneca, Md., nine miles south of Boyds. They will saw and cut stone for some of the buildings to be erected at Baltimore. The stone will be taken by boat up the Chesapeake and Ohio canal to Washington Junction and there loaded on cars.

**Editor Rock Products:**—In reply to your esteemed favor of the 29th ult., beg to say that the most satisfactory oiling device for pneumatic drill—and perhaps same can be used for steam drill—is the lubricator handled by A. M. Carron & Co., 109 Market Street, Pittsburg, Pa., and we have taken the liberty this date of referring your communication to them.

KEYSTONE DRILL CO.

The Faulkner Stone Quarries, at Canastota, N. Y., covering about 225 acres, have been purchased by J. P. Loughlin and James Mitchell from the

Rome Savings Bank. The consideration was \$3,000.00.

Work has been resumed at the Bugby quarry, Astoria, Ore., which is owned by the Northwest Construction Co. 1,000 tons of rock will be shipped to Fort Scott to be used for work in extending the jetty.

The St. Paul stone quarries near Shelbyville, Ind., are still flooded with water as a result of recent rains. It will take several weeks before the water and mud can be removed sufficiently to operate the quarries.

The city engineer of Winona, Minn., has been instructed to prepare plans and specifications for placing a municipal stone quarry and crushing plant in proper order, and submit estimates and specifications of the cost.

Fire in the lumber shed of the Brainerd, Shaler & Hall quarry at Portland, Conn., was extinguished by workmen about the quarry before the arrival of the fire apparatus. It was the first alarm the firemen had responded to since July 3 of last year.

The Boulevard Stone Co., of Paterson, N. J., has filed articles of incorporation. The main offices will be at Paterson and the company will carry on a general quarrying business. The incorporators are: William Van Wyk, John M. Zegel and Cornelius Vanderploeg.

The Balfour Quarry Co. have resumed operations in their quarries at Balfour and Montfort, N. C. The company's main offices are at Asheville, N. C., and they are owners of a valuable pink granite quarry at Rowan County near Salisbury. They are putting in a switch so as to reach their granite, and expect within a month to open a granite quarry.

**OBITUARY.**

**J. H. BISHOP.**

J. H. Bishop, Quincy, Mass., of the firm of J. H. Bishop & Co., granite manufacturers, died at Carney hospital, Boston, Mass., April 11. He was 44 years of age.

**THOMAS RITCH.**

Thos. Ritch, for half a century head of the Greenwich Stone Quarry, Greenwich, Conn., died April 22, at the age of 78 years. He supplied cut stone for many prominent buildings of New York, the Brooklyn bridge and Government forts near by.

**HILEND ROSE.**

Hilend Rose, one of the pioneer brick manufacturers of the Hudson valley, died suddenly at East Poughkeepsie, N. Y., April 14. He was 84 years of age.

**WILLIAM L. BRECHT.**

William L. Brecht, president of the Flint Brick Co., Des Moines, Iowa, died of heart failure April 17. He has been interested in one of the largest brick concerns in the West at the time of his death.

**GEORGE E. SMITH.**

George E. Smith, for 14 years head outside salesman of the Allis-Chalmers crusher department, dropped dead on Saturday, at 6 p. m., April 23, at his home in Englewood, a Chicago suburb, and without a moment's warning, was taken from an active and useful life. No man was better known in connection with the stone business throughout the country than Mr. Smith. He was born in Marion, Ohio, 54 years ago, and where he was for many years engaged in the quarry business. He afterwards came to Chicago, and connected himself with the Gates Iron Works, as a salesman for the Gates crushing machinery, which position he held for fourteen years. He has designed the machinery for nearly all the largest and best known crushed stone plants in the United States, and had a peculiar ability for seeing what was the best equipment for a given condition and advising a customer what to do, and having his advice turn out to the advantage of the customer. His popularity was deservedly great, his friends numerous and his enemies none. He was an honorable, upright, conscientious and thoroughly good man, who will be missed keenly by all who knew him, and there are a great many of them.

**EDWARD R. TOMLINSON.**

Edward R. Tomlinson, a well known brick contractor and secretary of the Master Brick Builders' Association, died very suddenly at his home, 703 Olive Street, Kansas City, Mo., April 20. He was 68 years of age.

# Stone.

## SOAPSTONE.

### Description of the Works at the Largest Deposit Known.

CHESTER STATION, VT., April 26.—We have had many inquiries with reference to the location of soapstone deposits, as well as inquiries as to what soapstone finish was. This is only perfectly natural since deposits of commercial importance are very few; perhaps the best known is the one which we are about to describe. Two companies are operating on this deposit, one producing soapstone in its various block forms, the other producing soapstone finish for use on walls and ceilings. The Union Soapstone Co., in charge of F. W. Atwood, at Chester Station, Vt., is operating three quarries on this material.

#### Method of Quarrying.

The practice in quarrying is to use a channeling bar and wedge it up. It splits with great regularity and four wedges are sufficient to lift a block six feet by four feet. The three quarries operated by this company are located at points varying from one mile to five or six miles from the mill. It is usually taken out in blocks six by four feet, varying in thickness. The bodies or deposits of soapstone occur in lens shaped formation from four to twenty feet thick, and twenty-five to 150 or more feet deep; usually having a width of twenty to thirty-five feet. The lenses usually more or less overlap each other, and almost invariably other lenses are found beneath, making an almost continuous vein to great depths. The dip of the deposits are about 15 to 20 degrees from the horizontal, extending under the mountain. The blocks when taken from the quarry are hauled by wagon to the mill, where they are sawed up into the desired slabs and sizes, just the same as huge blocks of wood would be handled. Old-fashioned vertical wood sawmills are used for the purpose.

#### Sawed Without Water.

We were much surprised to learn that this sawing was done dry; when necessary they are planed and tongued and grooved just the same as wood is done. While we said it was sawed up just the same as wood, there is a little difference, because the blocks are squared up with the same kind of a saw that is used for sawing slate, except that no water is used in sawing.

For washtubs and sinks, the slabs prior to being grooved and fitted together are thrown on a rubbing bed and sand-rubbed, much as a slate black bead is handled. While an ordinary wood auger will bore a hole rapidly, steel drills are used instead, as they last much longer. The pieces when all fitted up are set together by filling the grooves with Litharge cement, and then forcing the pieces together and fastening them with screws; the head being counter-sunk and the hole filled with plaster paris colored to match the piece. It is a general practice to put everything together before leaving the factory. The only point in the process of manufacture where water is used is on the rubbing bed.

#### Variety of Products Manufactured.

Some of the products manufactured are laundry tubs, sinks, oven bottoms for rotary ovens, stove linings, griddles, and rolls for thread works, foot warmers, and at one time quite a good deal of it was used for building stoves, and in and around Chester some of them may be seen to-day. They are wood stoves of course, and consist of slabs of soapstone held together by metal corners. This makes a desirable stove from many points of view. On account of the fact that they hold heat so well, a wood fire left at night will keep the room warm until morning, whereas an iron stove would be cold in a very few hours.

#### Geologic Classification and Condition.

The soapstone is mainly the mineral steatite, which is a mineral closely allied to Actinolite and

Serpentine, both of which are usually found somewhere in the neighborhood of the valuable soapstone deposits. There are found handsome magnetite crystals at uncertain locations in the quarries, and if a block of the soapstone containing these magnetite crystals gets on to the sawing bench there is all kinds of trouble, since the saws used are of soft steel and the magnetite is extremely hard. Pyrite is usually found in the neighborhood, but seldom in the Steatite deposits. The enclosing walls are usually Shists.

Nothing is wasted at the soapstone factory, because everything is taken which they do not want by the American Soapstone Finish Co., whose mill adjoins that of the Union Soapstone Co.

## SOAPSTONE FINISH.

This is a product resembling talc in its nature, and is not so well known as soapstone laundry tubs are, but seem to be much in demand where it is known. The factories which produce it are very limited. Soapstone finish is made by grinding the Steatite and Actinolite minerals which are obtained from the Union Soapstone Quarries, and from all of the trimmings at the mill. This Steatite is a hydrous magnesium silicate and occurs in foliated needle-like crystals. There is an entire absence of grit and the material feels silky and greasy at all times.

#### Ground and Bolted.

This material is broken up in a crusher and reduced to a very fine powder by grinders, after which the mica, which is always present, is separated and the finish divided into grades by means of different sized mesh bolters. The mica and coarser grades of soapstone finish are used for such purposes as a surplusing for concrete work



AMERICAN SOAPSTONE FINISH CO.'S PLANT,  
CHESTER STATION, VT.

and asphalt roofs, as well as in the manufacture of certain kinds of felt papers. The principal use of soapstone finish however, is as a finishing coat for plastered walls and ceilings.

#### Wide Range of Usefulness.

The American Soapstone Finish Co., Chester Station, Vt., aside from the use of it in patent soapstone finish, have sold their product for use in mortars, plasters, concrete work, asphalt paints, asphalt roofing and felt roofing, paper manufacture and for foundry facings. It will take the place of talc wherever color does not interfere.

The raw material is green to greenish grey in color in mass, but when ground is a blue or steel grey, and the natural color when used as a soapstone finish, is a pleasing steel grey. All colors of finish except green are manufactured. This company at one time was operated mainly for the production of the Potter blackboard material and this soapstone mortar was formerly known as Potter's, but now C. P. Dodge, of Amherst, N. H., is the proprietor and manager, but the officers of the company are at Chester Depot, Vt.

CLEVELAND, OHIO, March 28.—I have been busy trying to get the mill ready to start as soon as the ice would thaw. I am working blue stone, have a mill of six gangs, and have all the work I can handle. My stone is very hard and good for steps, door sills, etc., where there is lots of traffic over them, as they will never wear out.

W. H. CAINE.

Write ROCK PRODUCTS advertisers when wanting machinery or supplies.

## In the Front Rank.

George W. Maltby is certainly the pioneer in the cut stone business and began with the Carson Bros., at Rochester, N. Y. He came to Buffalo in 1880 with Whittemore-Rathborne Co., and from 1883 until 1895 the firm was known as Brady & Maltby with office and yard at 21 Maryland Street. After which time it has been George W. Maltby. His two sons, J. C. and William, are taking an active part in the business at the present time. The good concern with which Mr. G. W. Maltby has been connected for many years has been an influential factor in the cut-stone trade. The plant at Buffalo is well equipped with modern machinery, including a set of Paten Gang saws 7x8x15.

In the cutting shop there is a skylight which has a history, and we do not suppose there is a stone cutting shop in the world which has such fine glass anywhere in its makeup as this shed has in this particular skylight. This skylight was a circular window in the \$700,000.00 house built by Mr. Fargo, of the Wells-Fargo Express Co., many years ago. When this house was wrecked recently this window was secured intact and placed in the shed as a skylight.

I had the pleasure not long since of looking over the plant of the Blatz & Krebs Cut Stone Co., under the guidance of Mr. A. Krebs, president of the company. I saw they were sawing and handling exclusively marble and lime stone, making mosaic, as well as grinding their waste in an Allis crusher and making fine side-walks. They had under process 15,000 feet of stone for Seelbach's Hotel. Their saws were all busy, as well as the polishing and finishing machines.

Mr. Krebs in speaking about the business said: "This company has been in business for over thirty years. A few years ago Mr. Blatz retired, the plant being run by his sons and myself. We are operating eleven gangs and a complete line of machinery for polishing and handling."

In looking over their stock I found they had some Italian stock, Georgia marble and Serpentine Green from Washington, and other favorites. Speaking of the Serpentine Green, Mr. Krebs said it was the finest stock he had ever seen.

In looking over one of their sheds we found a crane operating by a crank, and Mr. Krebs said it was necessary for him to invent something in order to handle the stone as it was put in over thirty years ago and was one of the first to be used in the stone business. Some of the stock they had Mr. Krebs said came from across the way, the Knobs of Indiana. He said: "We have some of this stone to-day in the steps at the Court House, which has been there for years without wear, and you know a few people have gone up those steps."

From the work being done and the yards well cleaned up, it reminded me that the management of this company certainly have studied their business closely, for the manufacture of the granitoid cleans up all the spoils and chippings of the marble and stone.

The main sawing shop of the company is two stories, one side being the polishing and grinding rooms, the other the saws. They have a well equipped drafting room, and different sheds for developing the different processes of manufacture.

R. S. West, Wichita, Kan., is erecting cut stone works in that city to cost \$15,000.00.

Mr. Fred Andrus, the cut stone man of Milwaukee, is busy now working on the new Traction Building.

The Spottsville Iron and Gravel Co., Cloverport, Ky., have recently started up their new crushing plant at Webster.

Charles Y. Fuller has succeeded to the business of Fuller's Electric Stone Works, at Utica, N. Y. Mr. Fuller and his son, Albert B. Fuller, will conduct the business as partners.

The Raritan Blue Stone Co., New Brunswick, N. J., has been incorporated. Its headquarters will be 191 Elm Street, Perth Amboy, N. J. The incorporators are Antonio Munoz, Jesse Colyer and Chas. W. Barnekoy.

Texas Stone Co., of Beaumont, Texas, has been incorporated with a capital stock of \$50,000.00. The incorporators are: O. M. Stone, J. G. Tullis, of Beaumont; John Short, of St. Louis, Mo.; O. J. Martin, of St. Charles, Mo.; J. L. Megathlin, of Sabine Pass.

The Bavaria Lithographic Stone Co., with headquarters at Nashville, Tenn., have incorporated and will operate quarries in Maury County. W. D. Stuart, E. E. Edmondson, George W. Hayes, E. W. Jones, W. O. Gordon, F. W. Jackson, John D. DeGraffenried and E. A. Wales are the incorporators.



Owen Hockley and others of Quincy, Ky., will open up a new stone quarry at that place.

The stone crushing plant at the Webb Granite Quarry at Marlboro, Iowa, is being repaired by the Humphrey Machine Co.

Work has been resumed at the Duck Creek Stone Quarries, near Green Bay, Wis. They are working under difficulties, however, owing to high water.

The Superior Crushed Stone Co., at Rockmount, Minn., expects to be able to deliver stone about May 1. They will put in a new crusher early in the season.

Messrs. Berg & Olson have a crew of fifteen men at work installing a rock crusher plant at Rockmount, Minn. It is expected that the crusher will be ready for operation by May 1.

The stone quarry owners of Minneapolis, Minn., and vicinity and the stone cutters are engaged in negotiations to fix the wage scale for the present year. The stone cutters want an eight-hour day.

Reinhelmer Bros. are getting to work in earnest on the construction of the big stone crushing plant at their quarry south of New Paris, Ohio. Orders are already beginning to come in, and the demand for crushed rock seems to increase every year.

The Seneca Lake Stone Crushing Stone Co., of Dresden, N. Y., have commenced work. They have several large orders to fill. Charles Coleman, of Geneva, has been shipping several carloads of stone and getting the plant in readiness to start up.

R. E. McMance, manager of the Brunswick Marble and Granite Co., has opened an office in Jacksonville, Fla. This company has a contract for the erection of the Capital City Bank as well as that for the Government building at Jacksonville. They are erecting a large shed and the dressing of the stone will be begun in a few days.

The stone cutters and quarrymen at Tyndall, near Winnipeg, Can., are very anxious as to the course the Stone Cutters' Union intend pursuing with regard to a contractor, who, in order to get quicker results, has placed a stone planing machine in his yard. Of course the planer will do more work than several stone cutters could do, but it appears that the Union is protesting against the use of the machine.

### The Problem of Scythe Stones.

PIKE STATION, N. H., April 14.

Editor Rock Products:

We wish to take advantage of your kind proposition of the 16th ult., in which you invite manufacturers to ask questions regarding the details of their business and also to advise of any improved methods for working stone, results obtained, etc.

For many years we have split and bolted our rock for making scythe stones by hand. Our timber is of open, free rift, and therefore worked very nicely in this way. A year and a half ago we decided to try to bolt or saw our large timber with gang saws, into small bolts which would be the length of scythe stones.

We experimented at one of our factories for this purpose, and we thought with very favorable results, and decided to build a plant for sawing at one of our quarries at this point. We put in three 10x10 ft. gangs and one smaller size, all of the Cloggston make. These are fed by Frenier pumps. The bulk of the abrasive used is quartz sand taken from a near-by bank. When we came to start these large gangs we found that we did not succeed in cutting as much stone as we anticipated. We have made spurts at different times, cutting 3½ or 4 ft. per hour by using a large amount of crushed steel, but we find that the steel works into the rifts of the stone and spoils it. We also found that shot was even worse than steel, so we are obliged to use quartz sand almost entirely as an abrasive. So far the results secured have not been such as to make it a paying process.

We keep time reports, showing the exact number of hours each gang runs together with the exact number of inches sawed. We find that we have not been able to average over 1¼ in. per hour. We have experienced gang sawyers and have tried in every way to secure better results. We have now decided to put in another 10 in. pump, which will give us two large gangs each fed with a single 10 in. pump. We hope this change will solve the problem and if we find that it helps us will advise you later.

If you or any of the readers of Rock Products can give us any hints or helpful information, same will be gratefully received and we will be glad to reciprocate when we have opportunity."

THE PIKE MANUFACTURING CO.

## For the Retailer.

### The National Builders' Supply Association

Meets Semi-Annually.

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Official Organ, ROCK PRODUCTS.

#### Uniform Price for Cement.

MARION, OHIO, April 23.—In calling upon the cement dealers it will be found that they would rather have a reasonable uniform price on Portland cement than to have the market simply cut to pieces as it is at present, or to have it unreasonably high as it was in the fall of 1902, when some of the cement people were asking from \$1.75 to \$2.00 in bulk at the mill.

It is possible for the manufacturers of all high grade Portland cements, such as Vulcanite, Atlas, Rex, Medusa, Lehigh, etc., etc., to have a uniform delivered price in case they care to do so, by using the Lehigh Valley freight rates as the one to base such prices on as they may deem advisable to make. This applies principally to business in Pennsylvania, Maryland, Ohio, Indiana, West Virginia and possibly Illinois and Kentucky, but there is no reason why they could not have a uniform delivered price in any other territory they may ship.

Would it not be far more profitable for the Portland cement manufacturers to produce only one-half to three-fourths their present output and get \$1.75 per barrel in cloth, \$1.85 in paper and \$2.10 in wood delivered to points where the freight rate is from \$2.50 to \$2.25 per ton, than to sell their entire output at the prevailing prices?

Should it not be the desire of the cement manufacturer to protect retail dealers over contractors and consumers to the extent of from 10c to 25c per barrel, instead of jumping in and selling any one who may be wanting a car or two of Portland

cement at the very same price they ask a regular dealer in cements; in fact, one who is really trying to make a livelihood by doing so?

It will no doubt only be a question of time until we shall see a uniform price on Portland cements as now exists on roofing slate, anthracite coal, sewer pipe, building blocks, limes, as well as other clay and rock products.

#### Adding to Their Line.

PITTSBURG, Pa., April 22.—The Builders' Supply business has been a little backward this spring, largely we believe, on account of the weather conditions. We feel, however, that as spring opens up, building will resume and that we will have a fair year's business. We have added to our line this year Shawnee brick, manufactured by the Ohio Mining and Manufacturing Co., at Shawnee, Ohio, and the Massillon brick, manufactured by the Everhard Co., of Massillon, Ohio.

We have never handled lime by the hundred weight, the custom being in this city to handle by the bushel. We might state that the price of cement in this market is lower than it has ever been, due largely we believe, to the fact that some of the weaker companies have been compelled during the long winter months to offer their product at a sacrifice to encourage orders. The price is certainly below the cost to manufacture it.

D. J. KENNEDY CO.

#### Business is Good.

RICHMOND, VA., April 26.—There is as much work in the building line this year as there was last year. We do not think there will be as much cement work this year as there was last year unless it comes out later as there is no heavy work of this kind on the market just now. Business is good.

SITTERLING-CARNEAL-DAVIS CO.

#### Capacity Spreading Out.

INDIANAPOLIS, IND., April 25.—Our market is somewhat overrun with brokers, dealers' and manufacturers' agents all endeavoring to sell materials to the contractors. This naturally leaves a small picking for each one. However, we are not standing idle, but are pushing our business. We have purchased additional ground in the northern part of the city and are building a number of sheds, warehouses, stables and sundry buildings, equipping the yard in first-class manner as early as it is possible to do so. The warehouses will be cement, that is, the walls and floors cement, leaving an air space below the floors. Our stables will be built of hollow building blocks and the offices will be hollow building cement blocks. This yard we intend to make self-advertising.

There is a fair supply of public work to be done, the architects having their offices filled up with business, although our spring trade has not reached anticipations.

A. B. MEYER & CO.

#### Prospects Particularly Bright.

SAVANNAH, GA., April 22.—The prospects for the near future are particularly bright, although business at the present time is not so great as last fall, and all through the winter building supplies were particularly active. I am at present erecting a two-story warehouse in the Central Railroad yards adjoining one I put up last year, to increase my facilities. At the present time the new City Hall and an automobile wareroom are being erected. In both instances quite a large quantity of cement and lime will be used.

JOHN G. BUTLER.

#### Severe Winter Delays Trade.

CLEVELAND, OHIO, April 22.—The severe winter and late spring have naturally delayed trade, but the outlook for the present is fair, but prices are low, and unless we have some labor trouble, which we do not anticipate at this time, we look for a fair amount of business.

Lime in this vicinity is sold by the bushel and from past experience we think it would not be wise to try to educate the trade to adopt the weight system. We wish Rock Products success.

THE CLEVELAND BUILDERS' SUPPLY CO.

#### Better than Last Year.

INDIANAPOLIS, IND., Apr. 26.—Building operations in this city were practically at a standstill all the winter. Business is now good. 283 building permits were issued in March, 1903, amounting to \$301,765.00; 327 issued in March, 1904, aggregating \$423,913.00, showing an increase in favor of the present year of \$122,148.00.

Our Mr. L. S. Pierson is now building a three-story pressed brick flat with concrete foundation, to contain sixty rooms, arranged in suits of two and four rooms, fifteen bathrooms and all modern conveniences, heat furnished. There being a demand here now for such buildings where one is not obliged to rent a whole flat of five to seven rooms and pay for more rooms than are actually needed.

We have booked an order for two thousand barrels of Portland cement to be used for bridge piers on inter-urban railway—the cement being much easier transported than stone, is cheaper, and makes a better bridge. In fact concrete foundations are growing in favor in this locality which makes a much larger market for cement.

PIERSON BUILDING MATERIAL CO.

The Norwalk Brick and Stone Co., of Norwalk, Ohio, incorporated with a capital stock of \$10,000.00 to manufacture brick and operate stone quarries.

#### Trade Chat at Canton, Ohio.

The Canton Stone Co. has been more or less busy all winter.

The Ohio Mica Co., in charge of C. E. Vall, as receiver, is about winding up its affairs.

J. H. Eller & Co., also extensive manufacturers of metal roofing, ceiling and siding, are kept quite busy with a nice run of orders.

Hiram Shoub, dealer in mill and builders' supplies, is planning to put in a mechanical conveyance for the purpose of loading and unloading cars at his plant.

Spring business is just opening up with very good prospects at the Seeman Plaster Co.'s establishment, who handle both cut stone and plaster and other building materials.

Mr. F. A. Schwertner of the Berger Manufacturing Co., says they had a pretty good winter considering everything, but could have handled a little more business in metal roofing, siding and ceiling.

Mrs. Kenneberry, of the Kenneberg Roofing and Ceiling Co., says that business has been very good all winter, especially in the ceiling line. Things look very bright for their specialty, which is stamped metal ceilings.

The cut stone and monument concern of Bonhoff Bros., is busily opening up with good prospects. They expect to put in a pneumatic tool plant and are handling Quincy dark granite mostly, but use some Barre stock.

Wm. Barber & Son, prominent builders' supply people, also owning milling interests, are building a new warehouse for builders' supplies in the near future. It will be located on their property near the railroad in order to have better shipping facilities.

#### At Akron.

The Akron Roofing Co., 10 East Exchange, say they are quite busy on tin and slate work with plenty of orders.

Akers & Harpham, one of the large roofing concerns of the city, are having a fine run of business to open a promising season.

Charles T. Innman, of Innman Bros., who is also vice president of the Huggill Stone and Supply Co., at 40 South College Street, reports a quiet winter in builders' supplies, but that spring orders are coming in strong for gravel, etc.

George Huggill, president, and H. F. Goodwin, secretary, are officers of the Artificial Stone Co., using the Noyes F. Palmer system and a machine of their own construction, have been running full time whenever the weather conditions allowed.

The Akron Supply Co., located at 185 Mill Street, where Mr. W. T. Akers reports business opening with a rush, after the long and severe winter, and they have kept their tile plant, which is known as the Akron Vitrified Clay Manufacturing Co., going all winter, accumulating a fine stock now ready for Eastern shipment.

Business as a whole has been very good, and outside trade has been exceptionally heavy, says the Kasch Roofing Co., of 188 South Main Street, although local roofing business has been light. Rubberoid and composition roofing seem to have the lead, but the demand for vitrified clay tile is growing and a fine grade of work is wanted.

The Akron Wall Plaster Co., under the able management of S. C. Innman, is doing a splendid business. They are installing conveying devices at their plant for the purpose of handling their product and raw materials more rapidly. It is hard to find enough gravel to supply the demand for their concrete work. Mr. S. C. Innman is in Florida at the present time looking after an extensive fruit farm owned by the Innman brothers.

#### At Massillon.

Massillon will soon have a new firm in the line of builders' supplies, Messrs. List & Shott, to be located on Erie Street.

Our traveler failed to see Mr. Wilter, of the Wilter Steel Sand Co., and the Sounhalter Sand and Stone Co.'s office was closed before he arrived.

Mr. Allman, of the Dundee Silica Sand Co., says they are building at their Dundee, Ohio, plant and storehouse, 160x260 and 30 ft. high, all of brick, and their driers and bins will be so constructed as to deliver at box car level.

The monument men in Massillon are thoroughly up-to-date and hustling for outside business. J. L. Smith, 387 E. Erie Street, A. C. Strousbury, 86 E. Erie Street, and G. W. Stockwell, are all out of the city at one time on such errands.

The old builders' supply establishment of A. J. Clements is going to have a new home this spring. It will be a two-story and basement warehouse on the site of the old place of hollow vitrified tile, designed to carry a load of two hundred tons on the second floor.

Rev. C. Lescher, Galesburg, Ill., has secured an agency for the Purington Paving Brick Co., and is opening up operations with a vim.

H. Rasmussen, Rawlins, Wyoming, has secured agencies for the best marble and granite quarries and established an up-to-date monument plant.

Minnesota farmers have taken to the use of considerable salt for fertilizing purposes and the Revere Elevator Co., at Revere, are selling large quantities.

S. Pope Spates, St. Paul, Minn., is suing a cement company to recover damages because of a cement contract furnished in carloads, which has not come up to agreed quality.

C. H. Little & Co., of Detroit, Mich., dealers in cement, stone and building supplies, have filed a notice with the County Clerk that their capital stock has been increased from \$75,000.00 to \$125,000.00.

Frank Chandler has assumed the management of the Baltimore agency of the Winnesboro Granite Co., of South Carolina. Mr. Chandler is a native of Concord, N. H., and thoroughly acquainted with the granite business.

The American Hard Wall Finish Co., Knoxville, Tenn., has been incorporated with a capital stock of \$10,000.00 for the purpose of buying, selling and mining ores, clays, plasters, lime, cement, etc. The incorporators are: Hugh A. McCulla, John W. Sneed, Ben W. Ross, R. B. Goodman and Norman B. Morrell.

M. S. Hotchkiss has consolidated his plant with that of the Cement Product Co., and will continue in the cement construction business in both Lestershire and Binghamton, N. Y. This concern has placed an order for 6,000 barrels of the finest Portland cement and other supplies in proportion. Mr. Hotchkiss will manage both concerns and maintain his reputation for good work.

W. A. Titus, of the Standard Lime and Stone Co., Fond du Lac, Wis., says their firm is now quite busy. Business has been quite backward in March and the early part of April, owing to the bad condition of the weather, but the prospects for the immediate future are excellent and his firm has just received some very nice orders which will keep them busy for some time.

#### MAINE MARBLE NOTES.

Mr. Jamison, of Chase & Jamison, Pleasantdale, Me., states that he is likely to locate in new quarters before long.

E. J. Terry has bought the interest of his partner, B. C. Starling, in the marble business in the Missouri Valley, Iowa.

It is a fact worthy of note that there is a larger per cent. of marble used in monumental work in the extreme East than in the Central West.

The marble interests in Portland, Me., are well represented by Geo. E. Morrison, 18 Preble Street, E. M. Thompson, 327 Cumberland Avenue, and M. J. Landers, 7 Myrtle Street. All of these gentlemen state that a good deal of marble is being set up in and around Portland, and it is largely Italian marble that is used.

Write ROCK PRODUCTS advertisers when wanting machinery or supplies.

## Marble

Bradley & Ellis, of Georgetown, Del., have opened up a marble yard.

William T. Donovan, Cazenovia, N. Y., will establish a marble business at that place.

The Detroit Marble Co., Detroit, Mich., have filed articles of incorporation with a capital stock of \$9,000.00.

A rich deposit of marble has been discovered near Salida, Col., and development work has already begun.

Charles F. Hill, of Fleetwood, Pa., has purchased the well established marble yard of that place and will conduct the business.

J. F. Nisley and B. C. Bruce, of Lexington, Neb., have bought the marble works formerly operated by G. W. Miller & Co., of that place.

The Columbian Marble Quarrying Co., Proctor, Vt., have just received a new double lever machine, which they will place in the new opening at their quarry.

Reports from Knoxville, Tenn., indicate that all the marble quarries in that section are running full force and turning out large quantities of the Tennessee product.

The building commissioners for the new State capitol at Minneapolis, Minn., are in the market for marble slabs and blocks to be used for ornamental designs, fittings, etc.

The Crystal River Marble Co. has been incorporated at Denver, Colo., with a capital stock of \$500,000.00. The incorporators are: Thos. C. Hood, L. M. Strauss and I. A. Strauss.

The rubbing bed shop of the Vermont Marble Co., Proctor, Vt., which was burned, has been rebuilt and will be run by an induction motor instead of the wire cable as formerly.

Fred Eggebrecht, of Elgin, Ill., and John Miller, of McHenry, Ill., have purchased the well established marble works of William Outhouse. The new firm will be known as Eggebrecht & Miller and they will continue the business.

The Marble City Mining Co., of Marble City, Ark., have prepared five specimens of different colors and varieties of polished marble for exhibition at the World's Fair. Tombstones have been taken from this quarry for many years. The property is now in the hands of a Ft. Smith, Ark., company.

#### NOTES AT RUTLAND, VERMONT.

Leblanc & Sons, 123 Baxter St., Rutland Vt., will soon have a new sand pump on the market.

J. C. and ex-Mayor D. C. Temple, Temple Bros. Monument Works, are long on farm matters, and take a great deal of pleasure in watching their stock grow.

Mr. J. H. Fremier, of Fremier & Son, Rutland, Vt., contemplates a trip abroad with a view of extending the sale of his sand pump for gang saws. He says he has already shipped several to Australia.

If you want to know anything about Rutland politics go down to No. 11 Meadow Street, and see Alfred H. Everson, of the Everson Granite and Marble Co., and he will tell you how things are run in Rutland.

Cornile G. Ross, general manager of the Lincoln Iron Works, Rutland, Vt., who has just returned from a visit to the Indiana building stone belt, reports that district living up and that some machinery is to be put in at various points.

T. R. Patch, president of the Patch Manufacturing Co., Rutland, Vt., says that judging from what is already in and from the attitude of stone men generally, there will be a very busy season for cut stone men and stone machinery men. Mr. William LaBombard, of this company, is in Europe, combining business and pleasure in one trip.



# Artificial Stone

## A New Building Material.

James Henritzi, of Chelan, Wash., claims to have invented a new building material which he expects to manufacture at his home. It is as hard as marble, can be moulded into any shape and is much stronger and tougher than brick. A sample has been tested by the Washington Agricultural College, at Pullman, and it was found that it would stand a pressure of 263 pounds to the square inch. This new artificial stone can be manufactured and laid for about one-half the amount that ordinary brick costs. Mr. Henritzi has been experimenting for a long time and claims to have its manufacturing down to a point and upon a paying basis. It only weighs about 70 pounds to the cubic foot, and is easy to handle.

## Nearing Completion.

The work of rebuilding the burned brick plant of the Jackson Press Brick Co., Jackson, Mich., has moved rapidly. The brick work is completed, and the carpenters are putting on the roof, the new machinery is arriving, and will be installed at once, and the factory put into full operation as quickly as possible.

There is an immense amount of business offered the company, and they hold orders for immediate shipment for a large number of brick. Their new factory is an excellent advertisement for their brick, the entire building being constructed of sand brick, which were manufactured in their old plant, and went through the fire, and although exposed to the fiercest kind of heat, soaked with water while still hot, then exposed for a number of days covered with ice and snow, afterwards thawed out, and put in the wall, they are perfect brick, and do not show a check, crack or defect as a result of fire or exposure.

The officers of the company express themselves as well pleased with the present outlook.—*Jackson Daily Citizen.*

## Manufactured Marble.

MANITOBA, WINNIPEG, CANADA, April 21.—Ex-Mayor Dyke, of Fort William, is on his way West to Edmonton and Vancouver. He is introducing to the building interests of Winnipeg a Canadian invention—that of manufactured coral and Mycena marble. The coral is used for flooring and is a velvety and comparatively noiseless material of attractive appearance. The slab marble of which Mr. Dyke has various samples with him, is in all colors and every shading, resembling perfectly Mexican jasper, Blue Belge, Sienna, Alps Green, Pavanezzo, etc. The material is made by what is known as the Gulton process, that of a Canadian inventor now associated with the company, the Canadian Coral Marble Co., of Toronto. This marble is used in the King Edward hotel, the Bank of British North America, the Grand Union hotel and the City Hall, Toronto; and it is to be employed also in the construction of the interior of the new Union Bank, Winnipeg. It is considered very satisfactory when built into walls, columns, basements, caps, ceilings, wainscoting, and, in general, any construction for which slab marble is used.

## Overlooking Good Things.

MEMPHIS, TENN., April 29.—Mr. Ike A. Chase, of Memphis, Tenn., says, "There is a sand-lime brick company already organized here and I understand another one is being worked up. This place would be the finest point in the South for a sewer pipe plant making tile and firebrick. Our section is not yet alive to the value of these things, and properly presented to the people owning farm lands, especially the fine bottom lands about here, tiling would become general. Brick is the best paving material for the South, and tiling is the economic necessity for bottom lands, and sewer pipe essential to preserve the health of our cities."

## New Machine.

ASHLAND, WIS., April 22.—The concrete Construction Co. is going to install a new block machine in this city next week.

## Correction.

SPRINGVILLE, ERIE COUNTY, N. Y., April 28.—In your April issue under "Artificial Stone" notes, we see you have mentioned the organization of our company here, but have given our address as "Springfield", N. Y., which should have been Springville, N. Y. Also third member of our firm is C. J. Brossman instead of C. S. Brossman, as you have it. Yours truly,  
SPRINGVILLE CONCRETE CO.

The Flint (Mich.) Sandstone Brick Co., will be in operation by June 1.

The National Artificial Stone Co. has been organized at Chester, Pa., to manufacture and deal in artificial stone.

The Cement and Brick Co., Fond du Lac, Wis., is having plans for a frame factory building and kiln house made.

The Newark Artificial Stone and Plaster Co., Newark, Ohio, have about completed their plant and expect to be in operation in a short time.

The Gloucester Concrete Block Co., Athens, Ohio, have put in a Winget concrete machine, and will proceed to manufacture concrete building blocks.

The Composite Brick Manufacturing Co., New Haven, Conn., of which William J. Atwater is an officer, have purchased a site for the erection of its new plant.

The Waterford (N. Y.) Sand-Lime Brick Co. will have its plant located at West Waterford with a capacity of 20,000 brick a day. Operations are to begin immediately.

The Norwalk Brick & Stone Co., Norwalk, Ohio, has been incorporated with a capital stock of \$10,000.00 by R. E. Mesnard, G. A. Brindle, F. E. Miller, George S. Stewart and E. S. Kinney.

The Armored Concrete Construction Co., Baltimore, Md., has been incorporated with a capital stock of \$1,000.00, by the following parties: Isaac S. Filbert, Hugh Sisson, Henry B. Wilcox, Ferdinand Barre and Alfred E. Mealey.

S. S. Brandon & Son, Mobile, Ala., are receiving many encouraging testimonials from experts regarding the work of their new power concrete mixers, which turn out material for the laying of pavements, floors and building generally.

The Columbus Cement Stone Co., Columbus, Ohio, is erecting a building 40x112 feet to be used as a factory for the manufacture of cement building material. The building is being rushed as rapidly as possible in order to begin operations at once.

Sheddan & Buchanan, Akron, Ohio, will manufacture concrete building blocks, for which they have purchased machinery of the latest design to make blocks of every size and description. This firm will also build cement sidewalks after plans which are original with them and entirely new.

The Standard Stone Co., Iowa Falls, Iowa, has been incorporated with a capital stock of \$10,000.00, for the purpose of manufacturing cement building blocks. The directors of the new company are: J. B. Roney, H. B. Hall, William Weldon, W. H. Woods, B. J. Hall, A. C. Otterbach and F. H. Noble.

The Cement Products Co., of Binghamton, N. Y., have begun the erection of a large plant for the manufacture of hollow concrete building blocks. The new company has a capital stock of \$30,000.00. The officers are: F. H. Matthews, president; B. F. Weiden, vice president; O. S. Heller, secretary-treasurer. The business is already well established.

The Winget Concrete Machine Co., of Columbus, Ohio, are erecting a building of their concrete blocks at the St. Louis World's Fair. It is located just east of the press building and wireless telegraph steel tower, and north of the liberal arts building. The public are invited to inspect the building. One of the machines will be shown in operation.

The Cement Products Co., with offices at Wilmington, Del., and Detroit, Mich., controlling extensive patents for the manufacture of all forms of concrete work now in use, and many new products that are solely the property of this company, embracing heavy foundations, retaining walls, breakwaters, sewers, docks, dimension stuff, railroad ties, posts and poles, columns, monuments, statuary and high-class decorative work, sidewalks, street pavements, stairways and balustrades, besides brick of all sizes, shapes, colors, finish, texture, strength and weight, and have issued an interesting prospectus to attract capital which is really worth investigation.

# Side Talk.

## Soft Coal Without Smoke.

The Shawmut Mining Co., of Shawmut, Pa., have installed a device for burning soft coal without smoke. This device may be seen in daily operation under a number of boilers at Shawmut, Pa. Mr. Alfred Yates, general manager, is in the New England States at the present time introducing this device.

## Publicity Promoter.

In enlarging its sphere of operations, the Allis-Chalmers Co., of Chicago, Ill., have created a department of publicity, securing the services of Mr. Arthur Warren, whose work in the field of technical journalism has placed him in the class of "publicity promoters." Mr. Warren has had a wide newspaper experience, both in this country and abroad. He springs from a family of considerable mechanical aptitude and distinction. He has been connected for a number of years with the Westinghouse concern. Mr. Warren has already taken up his new duties and will devote his time and energies to the publicity department of one of the most enterprising concerns in the United States.

## Bricks of Real Concrete.

The Cement Products Company, of Wilmington, Delaware, has enlarged its plant and installed its new special machinery for making 50,000 brick per day of real, ordinary wet concrete, such as specified by all engineers to go under high buildings, railroad construction and sidewalks. The brick are impervious and of any desired color, and cost: common, \$3.50; face, \$5.00; and orders have been given for many buildings to be built of them this summer. For New York standard size, common brick, one barrel Portland cement and one and one-fourth yards of ordinary sand is used per 1,000 brick.

## Explanation Unnecessary.

"In the February issue of Rock Products we advertised two gas engines for sale. As evidence of an advertisement in your paper, wish to say that the larger of these two engines have been disposed of satisfactorily. Please change our advertisement to read "One Engine."

THE TOLEDO WHITE LIME CO.

The Marvin Electric Drill Co., Binghamton, N. Y., are out with a neat circular No. 19042, in which they exploit very attractively the "most efficient power drill on the market, and the cheapest to operate and maintain." The drill has been in successful operation for about eight years in the limestone quarries of the Solvay Process Co., as Split Rock, near Syracuse, N. Y., the Alsen Cement Co., at Alsen, N. Y., the Alma Cement Co., at Wellston, Ohio, and the Wellman Stone Co., of Portsmouth, Ohio. It is claimed that the electric generator which furnishes the power, has a lighting capacity of twelve to fifteen 16 c. p. lamps in addition to running the drills.

We have information that the American Hydraulic Stone Co., Denver, Col., is furnishing the system of construction for the National Electric Co.'s office building at Milwaukee, Wis., and the \$400,000.00 Peter's Hotel at San Diego, Cal., which were mentioned in last month's Rock Products. The new Baldwin apartment building at Denver and a large number of factories and residences throughout the country are being erected with the product of this company's process.

The Advance Pump and Compressor Co., Battle Creek, Mich., has installed an unusually large and attractive exhibit in Machinery Hall, St. Louis Exposition, consisting of boiler feeders, compound, tank, vacuum and quarry pumps. Two pumps will be in operation continuously and the exhibit will be in charge of C. A. Flinn of the home office. A large shipment was made last week to Italy for use in the great marble quarries of that country. Its product now finds a market in nearly all the foreign countries and is having a splendid demand at home.

The new agents of the Charles S. Warner Co., at New York, are Messrs. Fredenburg and Lowasbersey. The general business will be handled at their Wilmington and Philadelphia offices. Mr. J. Maxwell Carrer who has had charge of their New York offices for some years has become general manager of the Pen Allen Cement Co., Pen Allen, Pennsylvania.

The Harrison Supply Co., Mr. Nathan C. Harrison, general agent, No. 32 India Wharf, Boston, Mass., handlers of chilled steel shot and granite and marble polishers' supplies have furnished their friends with a half dozen beautiful blotters. The raspberries look good enough to eat and the other pictures are likewise attractive, and the blotters are useful.

The Artesian Lime and Stone Works, Chicago, Ill., have installed a No. 8 Austin gyratory crusher, and the Bronell Improvement Co., have also installed a machine of the same kind with three forty-inch screens. Armfield & Cartwright, of Portland, Ind., have purchased a No. 8 and a No. 5 Austin with screens, elevators and end dump cars for their 1250-yard plant at Ridgeville, Ind.

The Alamo Manufacturing Co., Hillsdale, Mich., has recently increased its capital stock to \$500,000.00. They are erecting a new building 130 feet long by 30 feet wide and adding some new machinery, which proves beyond a doubt the popularity of the Alamo gas engines. Competent mechanics pronounce the work of these engines excellent and its rapid growth is evidence that they are well designed.

The Thos. N. Dallett Co., Philadelphia, Pa., wishes to say to the trade, "In view of the fact that several manufacturers of pneumatic tools are seemingly conducting a campaign of intimidation by endeavoring to frighten prospective purchasers into buying no apparatus but their own, under a penalty of a lawsuit for infringement of patents, that a statement from us as to our position in the matter may be of interest. The recent decisions in the courts which have been so widely heralded, do not apply in any way to the Dallett tools. All our products are manufactured under our own patents, do not infringe in any manner the patents of other manufacturers, and our patrons may rest assured that in buying Dallett apparatus they incur no financial risk of this nature whatever. This we are prepared to guarantee to any purchaser of our tools. If any person has been threatened with litigation because of buying or stating that they are contemplating buying Dallett machinery, we shall esteem it a favor to be made acquainted with the facts of the case.

"Our plug drills and surfacing machines, as well as riveters and chippers, embody many novel and desirable features, in the right to use which we are fully protected by letters patent."

#### INFORMATION BUREAU.

791.—We are on the lookout for a grinder for soft material.

792.—I would like to get in line for the agency of a good cement to sell in Boston and vicinity.

793.—I will shortly add a stiff-leg derrick to my equipment.

794.—We are in the market for Indiana limestone.

795.—We are in the market for an asphalt mixer.

796.—We want asphalt machinery.

797.—We are in the market for quarry equipment.

798.—Where can we get Nicol's Cubic and Superficial Measure Calculator?

799.—We want information relative to Knox blasting.

800.—We are in the market for machinery for making ordinary sized brick—not the rock-faced brick, but the ordinary 2½x4x8½ in.

### FOR SALE—Or Will Lease

on a commission basis, 25 acres of the best slate land in Pennsylvania; if leased, financial arrangements can be made for developing. Address ELLSWORTH, care Rock Products.

#### BARGAINS—CHEAP.

Two 10 x 40 Buchanan Crushers.  
16 x 36 Wright-Cortiss Engine, also others.  
Three large Pumps, Duplex Compound, also Centrifugal.  
Six Direct Connected Dynamos to Triple Expansion Engines.  
Fifteen Horizontal Locomotive Boilers, different sizes.  
Four Hoisting Engines.

L. E. KENNEDY & CO., 17 Broadway, New York City.

## Wanted and For Sale

One insertion, 25c a line; Two insertions, 50c a line; Three consecutive insertions with no change in the composition, 66c a line. Count eight words to a line; add two lines for a head.

#### WANTED—HELP.

FOREMAN—For rock quarry in Central Illinois; must be thoroughly acquainted with the use of air drills and the handling of dynamite, and capable of handling common labor economically; must be strictly sober. Address, stating full experience, and giving references, ROCK QUARRY, care Rock Products.

SALESMEN—We want good salesmen all over the South for the Winget building block machine. Address A. D. MACKAY & CO., Chamber of Commerce, Chicago, Ill.

SLATE FOREMAN—To correspond with a man competent to take full charge of slate quarry as working foreman; references given and required. Address HOT SPRINGS SLATE CO., Hot Springs, Ark.

SLATE SPLITTER—One who understands his business. Address HOT SPRINGS SLATE CO., Hot Springs, Ark.

#### WANTED—POSITION.

MAINE HELP—For positions of trust with unquestionable references furnished at short notice. Experienced men in quarries, mills and woods. Address CYRUS FREEMAN STACKPOLE, Bangor, Me.

#### WANTED—MISCELLANEOUS.

PLANS AND ESTIMATES for continuous burning lime kilns, also address of man experienced in operating same. Address BECKWITH STONE AND LIME CO., Mt. Pleasant, Iowa.

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THE NAME OF EVERY PARTY BUYING, SELLING, OR USING any Hollow Concrete Building Block Machines, as well as the location of every building erected with Hollow Concrete Blocks without our license, and for first information we will pay a reward. We want a complete record of such buildings for our office. We are the originators, and are fostering the Hollow Block Industry to the best of our ability by warning the public against the fallacies and pitfalls occasioned by false statements and deceiving literature. Hollow Concrete Block Construction requires SKILL and EXPERIENCE, or proper INSTRUCTION; not one in a hundred has the least knowledge to-day of what the invention consists; it is not the hollow block in itself, but how to use it to save and make money; how to save cracks in the building; how to save material and breakage in the manufacture; how to avoid making useless blocks; how to secure attractive buildings; what a SYSTEM MEANS that constitutes SUCCESS; these are some of the things the public should know; the RIGHT MACHINES tell the story; it took years to make them RIGHT; WRITE Harrold Johnson, Lumber Exchange, Minneapolis, Minn.; WRITE T. J. Bennett, Owensboro, Ky.; WRITE US for further information and if you have been deceived we will help you recover your money; our business must not be lowered if we can prevent it. HARMON S. PALMER HOLLOW BLOCK CO., Washington, D. C.

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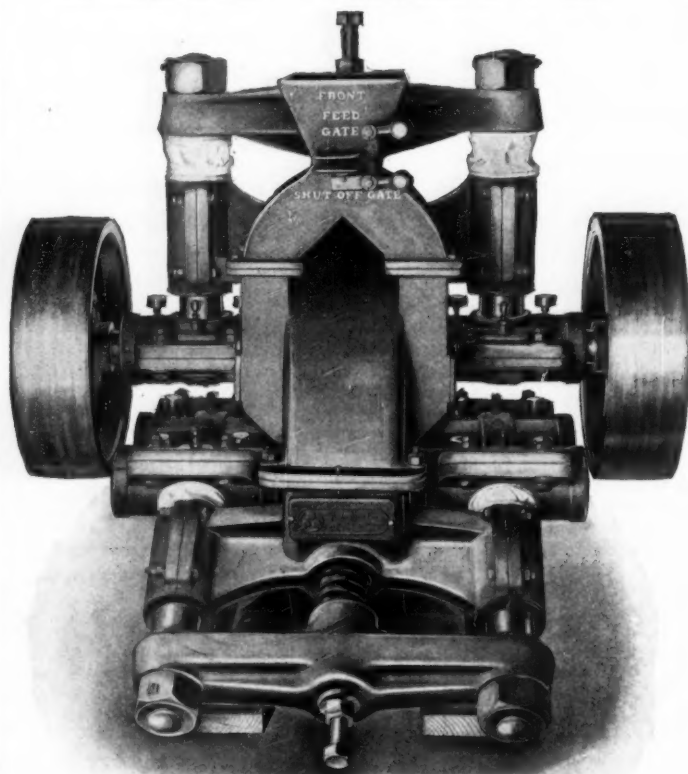
A PRACTICAL slate man to investigate our property with the view of taking an interest, and directing operations in the quarry and mill. The stock of the company is owned by six Boston men, none practical slate men, and all are occupied with their respective businesses. We believe we have a valuable property as slate quarries go, and one among the last of open cut quarries in the country of dark Maine slate of large size dimension stuff, and we want the co-operation of a man familiar with the slate business, a man who will take his share of the risks and profits. If satisfied, we will pay the expenses of right party to investigate property before entering into business relations with us. MAYFIELD SLATE CO., W. E. Osgood, secretary, East Milton, Mass.

REAL CEMENT CONCRETE BRICK.—WILMINGTON, DEL., April 2.—The plant of the Cement Products Co. in this city has been greatly enlarged and is almost swamped with spring orders. The new special machinery makes brick of real concrete, as in side-walks, following engineers usual specifications for solid concrete. It is claimed this is the only company making such bricks, all others having vainly tried clay presses, the sand cutting and destroying the best steel moulds in a few days, the few bricks made being very porous and unsatisfactory. Common cement brick, New York standard size, are costing \$3.50 per thousand, and are impervious to water. The processes are purely mechanical, and are also used for making cement building blocks and sand-lime brick. The company has scores of patents and applications covering and protecting machinery, processes and products. Until the Supreme Court anti-trust decision in the Northern Securities case, the Cement Products Co. intended to own control of every plant. That decision has caused them to think it best to authorize independent plants with exclusive rights. The plant here is simple and comparatively inexpensive, having but 20 h. p. for 50,000 capacity. A number of clay brick plants are negotiating for the right to add a concrete brick machine to their equipment, as are also several building block and sand-lime brick companies. No kiln or steaming cylinder is required. Two or three quarries desire the machine to make bricks of the waste-stone dust made in crushing rock.



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Takes one inch feed. Grinds to any fineness  
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CEMENT CLINKER,	40 bbls.	to 98%	20 Mesh.
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LIMESTONE,	2½ tons	" "	200 " "
LIME,	4 " "	" "	100 " "
ROSENDALE CEMENT,	43 bbls.	" 90%	50 " "
QUARTZ TRAP-ROCK,	4 tons	" "	40 " "

You can easily figure from this what a  
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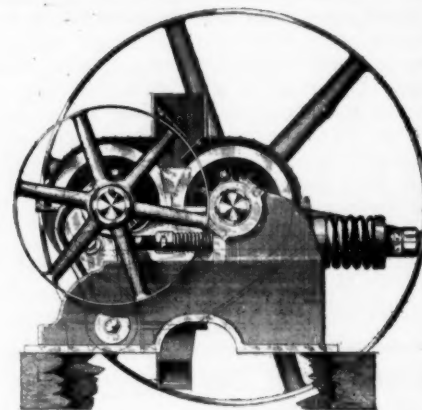
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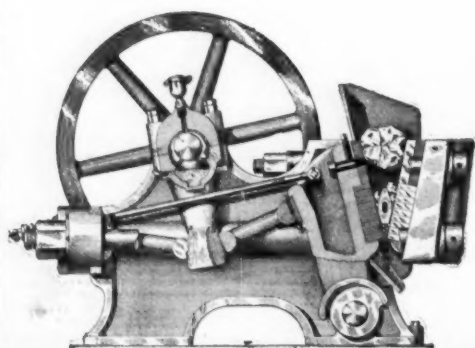
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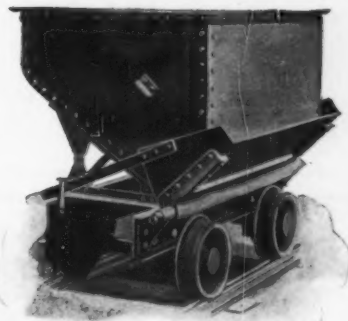
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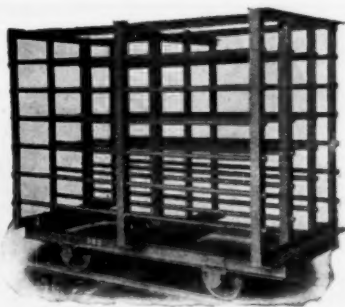
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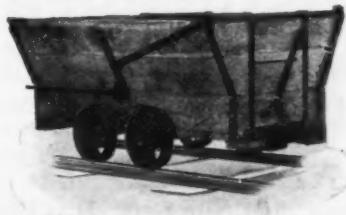
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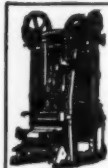
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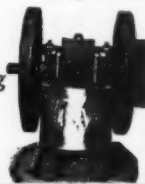
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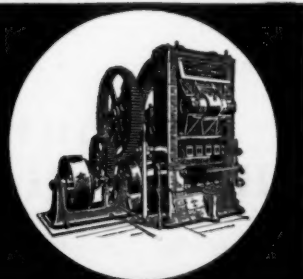
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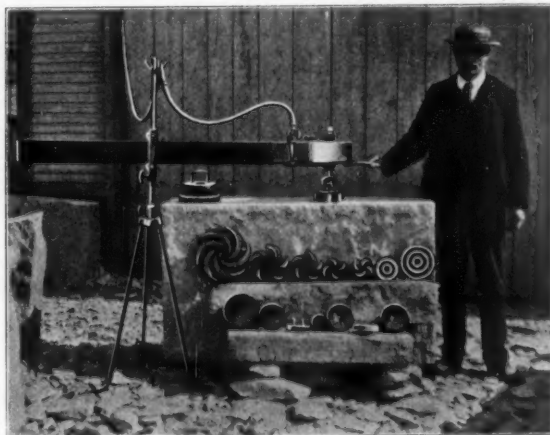
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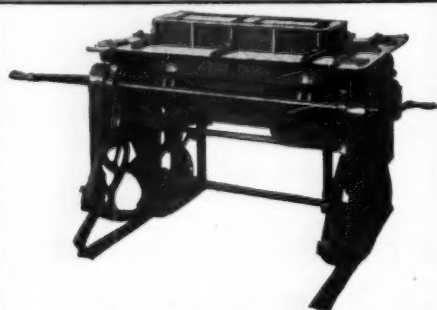
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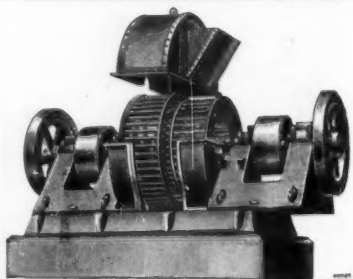
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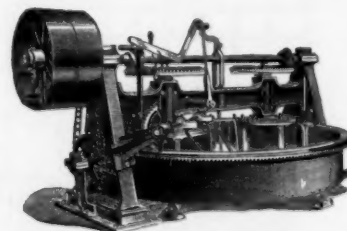
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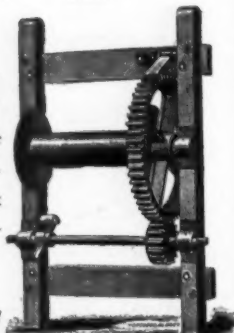
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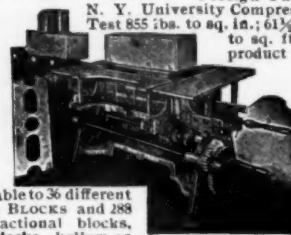
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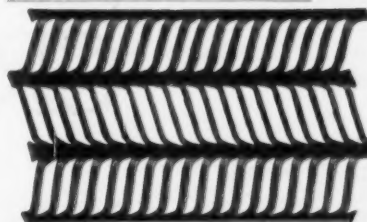
REVOLUTION IN BUILDING.

Fire Proof Buildings with

**HOLLOW CONCRETE WALLS.**

That will last for all time. You furnish seven parts of sand and gravel (or broken stone), one part cement, seven men (six unskilled) and we do the rest. Making by hand labor 1,000 square feet of Fire-proof wall in a 10 hour day. Ready for laying in 10 days. No burning—simply turn on the hose. No power necessary. Reward for proof of infringement. Patent Guaranteed

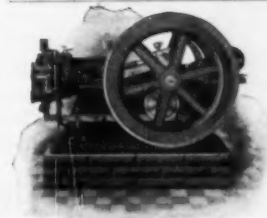
THE AMERICAN HYDRAULIC STONE CO. Century Bldg., Denver, Col.



Herringbone Expanded Steel Lath is much used for exterior concrete as well as interior work.

—MADE BY—

The General Fireproofing Co.  
Youngstown, Ohio.



THERE are other gasoline engines, but none that start so quickly and use so little gasoline as the ALAMO. No small triggers or springs to get out of adjustment or give trouble. Perfectly built. An igniter that always ignites. Works as well in January as July. Price reasonable. Write for beautiful catalogue.

The Alamo Manufacturing Co.,  
HILLSDALE, MICHIGAN.

# Sand-Lime Brick



## The Best Money Maker In This Country To-day

Plants installed complete on the AMERICAN SYSTEM equipped with AMERICAN MACHINERY, started and operated until 100,000 brick are made. Quality Guaranteed. No Failures. No Experimenting. No Royalties. No Secrets. No Chemicals. Send for Free Booklet.

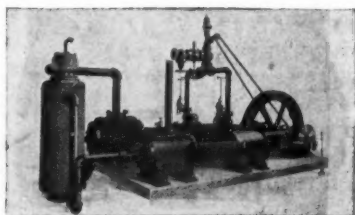
## AMERICAN SAND-LIME BRICK CO.

GREAT NORTHERN BUILDING, CHICAGO, ILL.

NEW YORK OFFICE; 39 Cortlandt St. SOUTHERN OFFICE; City Bank and Trust Co. Bldg., Mobile, Ala. SAN FRANCISCO OFFICE; 501 Rialto Bldg.

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INGERSOLL-SERGEANT  
**Rock Drills and Air Compressors**



Class "GC" Air Compressor with compound double acting air cylinders and receiver intercooler.

**Mining, Tunneling and Quarrying  
Machinery of all Kinds.**

**PNEUMATIC TOOLS.**

**COMPLETE EQUIPMENTS FURNISHED.**

We shall be pleased to refer you to successful installations in your neighborhood.



"New Ingersoll" Rock Drill.

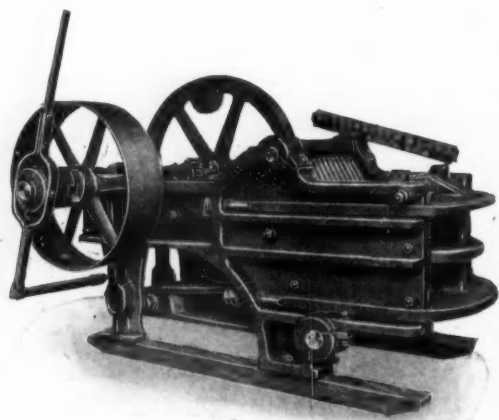
THIS drill is equipped with the most perfect rotation mechanism yet designed, being simple, positive and durable in its parts. The Ratchet is drop forged ground and carefully hardened. The small pawls are made of tool steel, hardened in oil, as is also the Rifle Bar which runs in a removable bronze nut screwed in the end of the piston, thus easily replaced when worn.

Send for Catalog No. 43.

CLEVELAND, O. THE  
CHICAGO, ILL.  
ST. LOUIS, MO. P. 2.

**INGERSOLL-SERGEANT**  
26 CORTLANDT ST., NEW YORK.

DRILL CO. BOSTON, MASS.  
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# CRUSHERS

for soft and medium  
hard rocks

## GYPSUM MACHINERY.

We make a complete line, including  
Calcining Kettles, Nippers, Crackers,  
Screens, Reels, etc. We also design  
Plaster Mills and furnish all necessary  
machinery. 3 3 3

**BUTTERWORTH & LOWE**  
GRAND RAPIDS, MICH.



# N. LAPHAM CO.,

Rooms 1529, 1530, 1531 and 1532, 150 Nassau St., NEW YORK, N. Y.

**SLACK COOPERAGE STOCK.**

# CEMENT AND LIME STOCK

A SPECIALTY.

MILLS: New York, Ohio, Kentucky, Virginia, Pennsylvania, Michigan, Tennessee and North Carolina.

## Special Machinery

for the making of

# Wood Plaster

Plants installed complete.  
Economy and capacity recognized.

WRITE FOR PARTICULARS.

**ELYRIA PLASTER MACHINERY CO.**  
ELYRIA, OHIO.



## Limestone Tools

SPECIAL PRICES ON

**Bush Hammers, Tooth Axes,  
Hammer Head Tools.**

Send for Special Rock Products Offer.

**W. H. ANDERSON & SONS,**  
INCORPORATED.  
TOOL MANUFACTURERS.

27 St. Aubin Avenue, Detroit, Mich.

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# *Dallett Plug Drills* and *Surfacing Machines*

Represent the latest advances in the construction of pneumatic tools for stone working. It will be to your advantage to investigate the improvements which are being effected by us in this class of apparatus before risking, perhaps, a large investment in machinery that may prove antiquated almost before it is installed.

WE SOLICIT YOUR REQUEST FOR INFORMATION.

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AIR COMPRESSORS, ROCK DRILLS, PNEUMATIC APPLIANCES.

## AUTOMATIC ROTATING HAND ROCK DRILLS.

These drills in both sizes are adapted to drilling in granite, bluestone, trap-rock, marble, sandstone, limestone, slate, etc.

### No. 1.

Designed for drilling holes from  $1\frac{1}{4}$  in. to 2 in. in diameter to a depth of 1 ft. to 6 ft.

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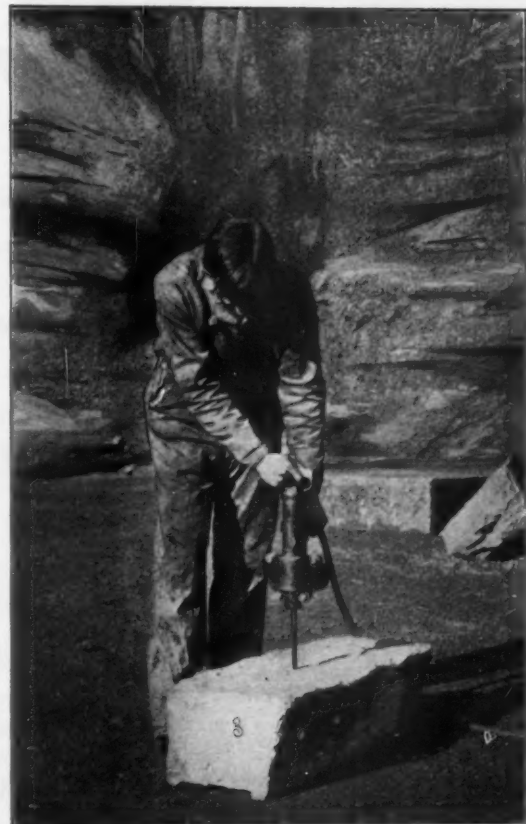
Designed for drilling holes  $1\frac{1}{4}$  in. and under in diameter, and to a depth of 1 ft., are especially adapted to plug-hole work.

## AIR COMPRESSOR,

Four-Cylinder Belt-Actuated.

Self-lubricating, simple, compact and durable in construction; has a capacity of one cubic foot of free air per revolution, and is designed to operate at 200 revolutions or less per minute, occupies a floor space 66 x 30 in.

Further information, catalogue, prices, etc., will be furnished upon application.



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# Gypsum Machinery

A fine and complete line of Modern Machinery.

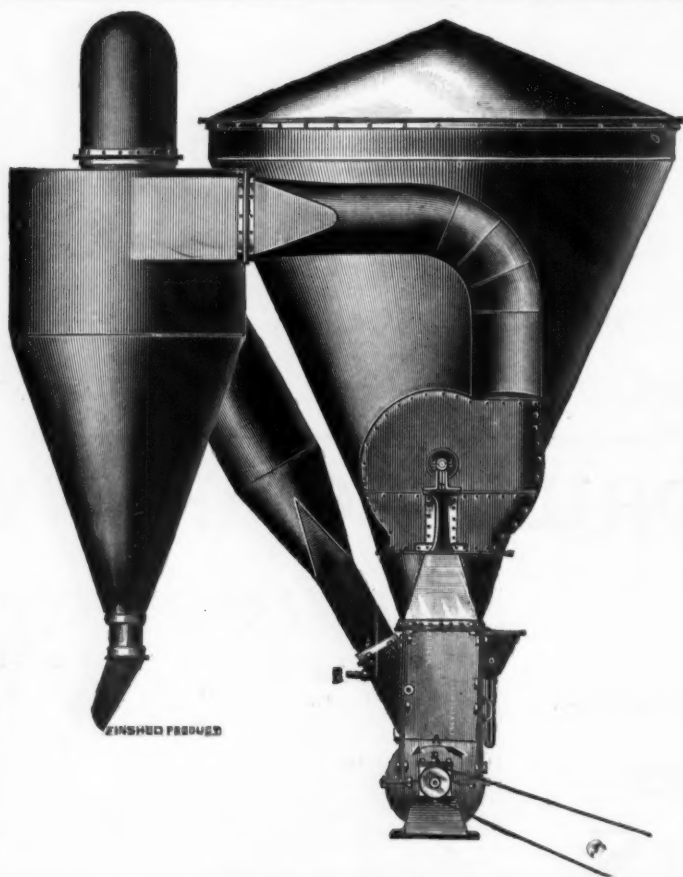
## KETTLES, CRUSHERS, NIPPERS, ETC.

We are now building the new Plymouth Mill at Fort Dodge, Iowa, the finest mill in the United States.

ASK FOR CATALOGUE.

### Des Moines Manufacturing and Supply Company

DES MOINES, IOWA.



### The Raymond Patented Vacuum Air Separator

Reducing and Separating Machinery of all sorts  
for handling very fine Material. \* \* \*

*Separators of Special Designs for*

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Air Separators for Cement Mills  
and Lime Plants,  
Roller Mills, Pulverizers,  
Special Exhaust Fans.*

*Grinding and Separating of any material to  
ANY FINENESS.*

*Absolutely dustless in operation.*

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Carefully Straightened and Cut Square and True. Ordinary Sizes Constantly on Hand.

**WEST LEECHBURG STEEL CO.**

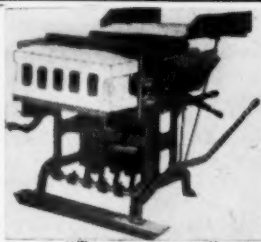
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For the manufacture of hollow or solid concrete building blocks. Adjustable for all sizes and shapes. Delivers the block on its side, a saving of labor. Wood pellets are used, other machines use iron pellets, a full set of which cost as much or more than price asked for our complete machine. CONSIDER WELL BEFORE PURCHASING. Agents wanted in every State.

**THE STANDARD SAND & MACHINE COMPANY**  
CLEVELAND, OHIO

Manufacturers of Mixers, Screens, Dryers, Conveyors, Etc., for equipping Building Block and Wall Plaster Plants. Ask for catalogue and prices.



"THE SIMPLICITY."

### "HAWK" Brand

STEEL for  
POINTS,  
CHISELS,  
DRILLS, Etc.

Trade-Mark—1897—Registered.



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TOOLS,  
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Every Description of Steel.

**HAWKRIDGE BROS., 303 Congress St., Boston, Mass.**

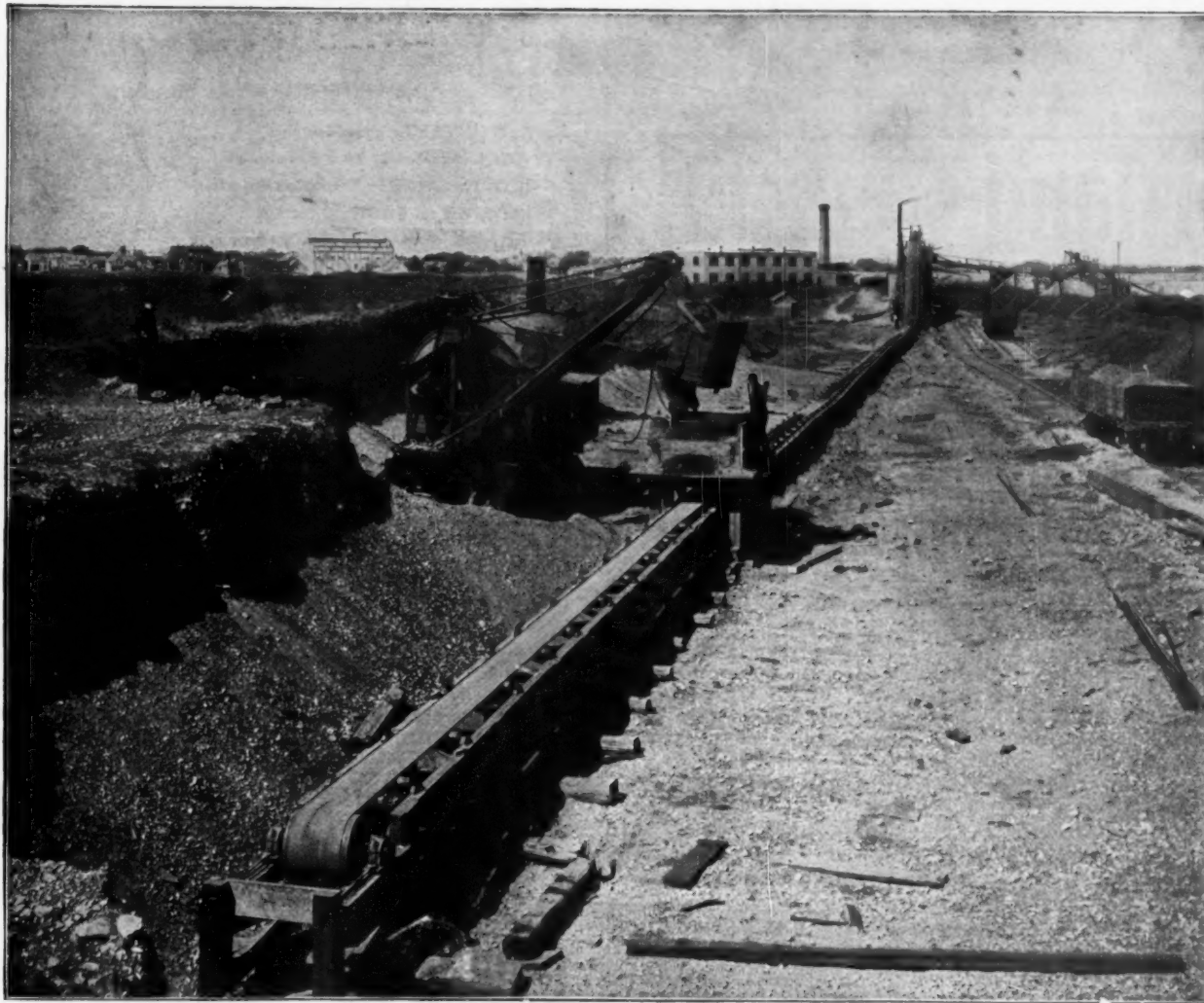
## The BRENNAN ROCK and ORE CRUSHER

WRITE FOR CIRCULAR.

Box 745. **COLDWELL-WILCOX CO.** Newburgh, Y. N.

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Gravel Plant of W. T. EATON, LIBERTYVILLE, ILL. Equipped with "LEVIATHAN" Belting. (1458 feet 18 in. 6 ply.)  
Length of Conveyor 450 ft. Length of Elevator 250 ft. Elevation 38 ft. Handling 35 tons **Washed Gravel** in 45 minutes.

Actual carrying capacity 70 tons per hour. There are no buckets, stops or cleats, and no side strips used on the conveyor or elevator. The belt shown in picture has been in use two seasons (April 15th to Nov. 1st), running continuously in all weather, no protection, whatever, is in first-class condition, ready for next season's run. The above is only one of many like instances in the record of "LEVIATHAN"

*We Submit FACTS, not claims, for your Consideration*

## MAIN BELTING COMPANY

Makers of Main and Heavy Machine Driving Belts, and Belting for the economical handling of rough materials, under severe conditions. A careful study of the requirements in each instance guarantees to all users of

# "LEVIATHAN BELTING"

MAXIMUM RESULTS AT A MINIMUM OF COST.

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STORES: 120 Pearl St., Boston, Mass., 40 Pearl St., Buffalo, N. Y., 309 Broadway, New York, N. Y.  
LARGE STOCK. Get Catalogue "FACTS."

PROMPT SHIPMENTS.

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## Buckeye Portland Cement Co.

ESTABLISHED 1888.

Manufacturers of the celebrated  
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# Portland Cement

"Buckeye" has stood the wear and tear in many important places for the past fifteen years and under the new process of manufacture is now better than ever :: :: ::

WE INVITE YOUR  
CORRESPONDENCE.

Bellefontaine, Ohio.

The Best Portland Cement Is

## "LEHIGH"

MANUFACTURED BY

### Lehigh Portland Cement Co.

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Write for Catalogue.

Capacity, 4,000,000 Yearly.



## "LIMOID"

SEWER PIPE  
FIRE BRICK  
PLASTER, ETC.

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LAND TITLE BUILDING,  
PHILADELPHIA.WILMINGTON,  
DELAWARE.

## BANNER CEMENT CO., LOUISVILLE CEMENT.

MAKERS OF THE FAMOUS BANNER BRAND OF

Guaranteed that 90 per cent. will pass a  
ten thousand Mesh Sieve.

WE SELL TO DEALERS ONLY.

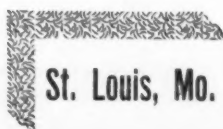
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### CHARLES W. GOETZ LIME & CEMENT CO.

MANUFACTURERS OF AND DEALERS IN

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Building Materials.



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## THE OMEGA PORTLAND CEMENT CO.

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For Road Building. Ballast for Rail Roads.  
Rip Rap for River Work and Levee Building.  
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Plaster. No order too small for our careful at-  
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### THE ALTON LIME AND CEMENT CO. ALTON, ILLINOIS.

## Chicago Portland Cement Co.



MANUFACTURER OF...

### "CHICAGO AA" PORTLAND CEMENT.

We make one brand only.

The best that can be made.

## Elk Portland Cement



is made from LIME-ROCK AND  
SHALE. It is always uniform and  
is unexcelled for every kind of work  
for which cement is used. Write  
us for prices

### Elk Portland Cement & Lime Co.

PETOSKEY, MICH.

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## Swindell Patent Lime Burner

and Swindell Patent Water Seal Gas Producer.

The only successful method of Burning Lime with Producer Gas.

40 per cent. increase in output of Kilns.  
30 per cent. Saving in Fuel.

Eight Kilns in successful operation for past seven months at Toledo White Lime Co.'s plant, Martin, Ohio.

### WM. SWINDELL & BROS.

German National Bank Building,

PITTSBURGH, PA.

WE MANUFACTURE  
The Finest Qualities Dry Mortar Colors,



Red (2 shades,) Black,  
Buff, Brown, also  
Makers of Graphite

Mineral Red and  
Purple Oxide  
Paints.

Samples and Prices furnished  
upon application.

We protect the Dealers.

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J. W. THEW, Treasurer.

## The Central Ohio Lime and Stone Co., of Marion, Ohio.

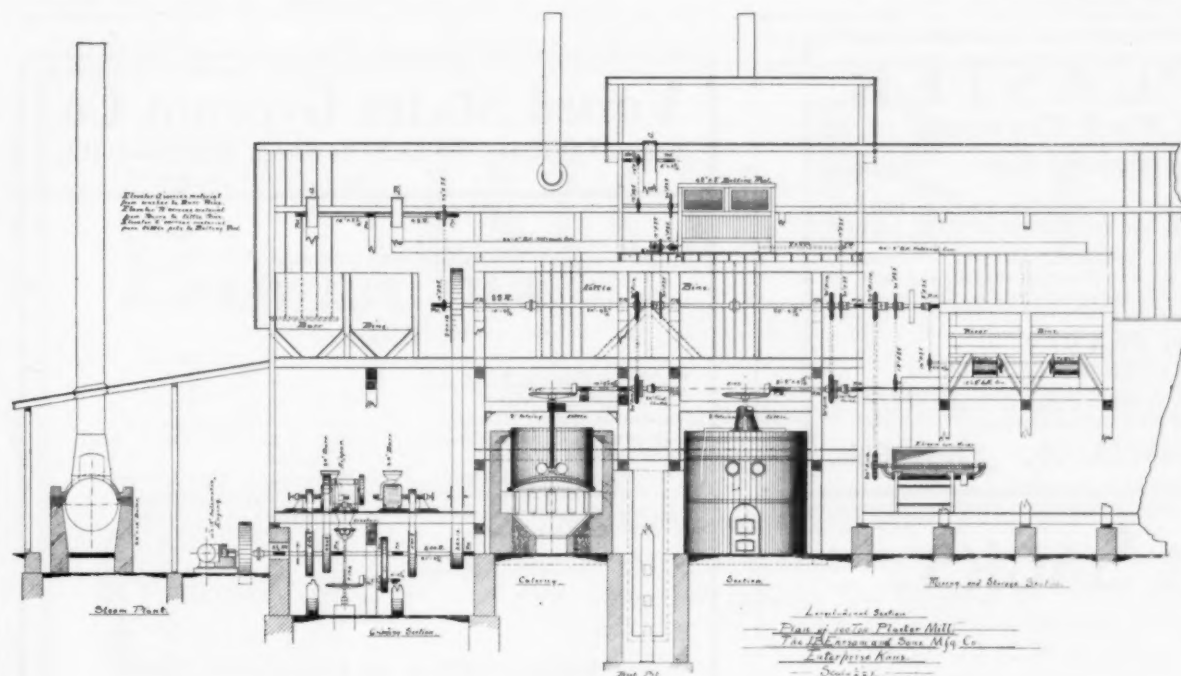
Capital \$150,000.

We own One Hundred and Seventy Acres of the best and choicest lime and stone land in Central Ohio. The plant is located north of the city on the Pennsylvania R. R. We are now operating our plant with a large force of the most experienced men that can be found anywhere.

**We produce and have the statements to show that we have the best white lime that is on the market. Our furnace stone is pronounced by experts and consumers to be the best they have ever used.**

Our kilns and crusher plant are now in full operation and we solicit your patronage. We guarantee our product to be as good as the best, give us a trial order and be convinced of our statement. All orders placed with us will receive prompt attention.

THE CENTRAL OHIO LIME AND STONE CO.



## WE MANUFACTURE

Calcining Kettles  
Jaw Crushers  
Rotary Crushers  
Bolting Reels  
Shaking Screens  
Turkey Emery Rock  
Burr Mills  
Plaster Mixers  
Hair-Pickers  
Conveying, Elevating  
and Power  
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Machinery.

We are prepared to submit plans and estimates for the complete equipment of wall plaster mills, and furnish all machinery required of our own manufacture and design. **Special Machinery to meet special requirements.** Twenty years experience in building and equipping Wall Plaster Mills. New Catalogue in press. Write for a copy. Address

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ENTERPRISE, KANSAS.

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## THE NEW PROCESS Wood Fiber Wall Plaster.

A Winner from the beginning. Architects and Artisans unite in its praise. The demand for this famous brand of wall plaster fast becoming universal. Formulas and machinery protected by U. S. letters patent. Territory rights to manufacture for sale on reasonable terms. Plans and specifications for new mills furnished. Machinery supplied and located at minimum cost. Trade supplied with MASTIC from our mills. If this looks good to you write

**The Ohio Wood Fiber Plaster Co.**  
COLUMBUS, OHIO.

## Stucco Retarder.

A stucco retarder absolutely uniform in strength. Strongest retarder made. Insures a slow and gradual set. Samples free for tests. Information concerning plaster formulas furnished.

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# STUCCO RETARDER.

We are the largest manufacturers of retarder in the world. Our goods are both strong and uniform. If you have not already tried them send for sample. Freight prepaid to any point in the United States or Canada.

**THE BINNS STUCCO RETARDER CO., Uhrichsville, Ohio.**

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*The Coming Wall Covering*

WE ARE THE ORIGINATORS.

After several years of experimental work we have reached **SUCCESS** and our goods are recognized as of the highest quality.

We wish to establish our trade in every important market, and will give local capital and local talent an opportunity to go in with us in the erection and operation of

### MIXING PLANTS

Using our **IMPROVED MACHINERY** and **FORMULAS**.

The management of the local plant to remain with **LOCAL INTERESTS**.

Write us for full information.

*The* **ELYRIA WOOD PLASTER CO., Elyria, Ohio.**

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THE MOST CONVENIENT.  
SATISFACTORY &  
CHEAPEST PACKAGE FOR  
**CEMENT.  
PLASTER.  
HYDRATED LIME**

WE SHALL BE PLEASED TO SEND  
SAMPLES AND QUOTE PRICES.

## United States Gypsum Co.

General Offices, 184 LaSalle Street, CHICAGO, ILL.

### Manufacturers of WALL PLASTERS Unsanded

Alabaster Cement Plaster.  
Big 4 Cement Plaster.  
Diamond Cement Plaster.  
Duncombe's Cement Plaster.  
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K. & N. Cement Plaster.

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Red, White and Blue Cement Plaster.  
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### Prepared WALL PLASTERS Sanded.

Adamant Wall Plaster.  
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**BRANCH OFFICES:** Ft. Dodge, Iowa; New York Life Bldg., Omaha, Neb.; 480 Virginia St., Milwaukee, Wis.; Lumber Exchange, Minneapolis, Minn.; Foot of Tower Ave., West Superior, Wis.; Hammond Bldg., Detroit Mich.; Indianapolis, Indiana; Sandusky, Ohio.

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# The Ohio Lime Company,

MANUFACTURERS OF AND WHOLESALE DEALERS IN

## WORKS AT

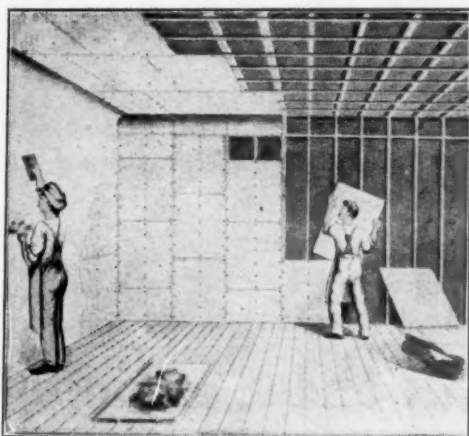
Fostoria, Ohio.  
Gibsonburg, Ohio.  
Sugar Ridge, Ohio.  
Tiffin, Ohio.  
Woodville, Ohio.

**Ohio White Finishing Lime,  
Ground Lime, Lump Lime,  
Fertilizer, Hydrate Lime,  
Cement, Plaster,  
Hair, &c.**

Capacity  
3500 Barrels  
Per Day.

## OFFICE:

209-210-211 CHAMBER OF COMMERCE BUILDING.

**TOLEDO, OHIO.**

## Sackett Plaster Board

A material used in the construction of Walls and Ceilings in place of wood and metal lath. Made in Sheets 32" x 36", 1/4" thick. Nailed directly to studding and finished with hard plaster.

Sackett Plaster Board is light, economical and durable. Will not warp, buckle or shrink. Is warmer than lath, consequently saves fuel. Is a fire retardant recognized by fire underwriters.

Walls and Ceilings constructed with these boards cannot fall.

## GRAND RAPIDS PLASTER CO.

Manufacturers of Wall Plasters,  
Calcined Plasters and other Gypsum Products.

WESTERN SALES AGENT.

**GRAND RAPIDS, MICH.**

**Big  
B**



**Lime.**



# BIG B LIME

ITS STORY OF SUCCESS.

**OUR COMPANY:**

The Norris and Christian Stone and Lime Company, Marion, Ohio, 20 years of experience.

**OUR PLANTS:**

Three plants comprising seventeen kilns, with daily capacity of 6000 bushels.

**OUR RAILROAD FACILITIES:**

Pennsylvania Company; The Big Four System; The Erie System, 3 Divisions; The Hocking Valley; assuring prompt shipments.

**OUR LIME:**

Cool working, free slaking, suitable for all purposes. Popular for SAND LIME brick. Sold in bulk and in barrels.

**OUR STONE DEPARTMENT:**

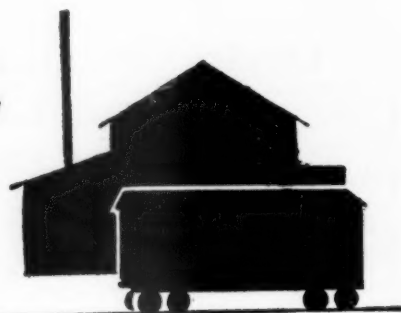
Crushed Stone for Macadamizing, Railroad Ballast, special sizes for Concrete, White Fine Screenings for Driveways and Parks.

**THE NORRIS AND CHRISTIAN STONE AND LIME CO.**  
MARION, OHIO.

Tell 'em you saw it in ROCK PRODUCTS.

When You Need a Car of

**COOPERAGE**



**Order Through Us.**

Shipments made from mills  
located in Ohio, Indiana,  
Illinois, Wisconsin, Michigan,  
Pennsylvania. ♡ ♡ ♡ ♡ ♡

In straight and mixed  
carload lots for ♡ ♡ ♡ ♡ ♡

**Lime, Salt and Cement.**

We also Manufacture all kinds of

**KEGS and BARRELS**

FOR

**ROCK AND IRON  
PRODUCTS.**

*The* **Edwin Bell Co.**

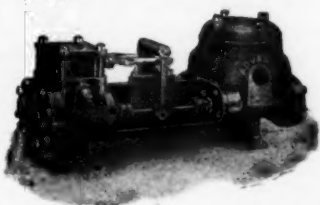
**PITTSBURG, PA.**

**We Solicit Your Correspondence.**

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## DON'T BUY A NAME



Because you have been doing so for many years

### BEST BY TEST

Is the experience of hundreds who have tried the new "ADVANCE" Duplex Steam Pump. Its name denotes its position in "advance" of all others. There are THREE REASONS WHY we excel all other pumps. It's because of a

NEW IDEA. DO YOU WANT TO KNOW WHY?

**ADVANCE PUMP & COMPRESSOR CO.**

Lock Box D.

BATTLE CREEK, MICHIGAN.

## ALLEGHENY QUARRIES

LANCASTER, OHIO.

**Rough, Cut and Sawed Sand Stone.**

RAILROAD BRIDGE STONE A SPECIALTY.

## SAND

Crushed Sand Stone for Concrete.

Sand, 98 per cent. Silica, suitable for core work, Iron and Steel work, Cement Block and Mortar. Also Fire Sand.

**G. S. FRAMBES, Successor to F. C. NEEB.**  
ESTIMATES FURNISHED.

## Vitrified Sewer Pipe

**Flue Linings, Building Blocks,  
Stove Pipe, Chimney Tops,  
Wall Coping, Etc.**

The Best is none too Good—"We Make the Best."

Write us for particulars.

Refer to Rock Products.

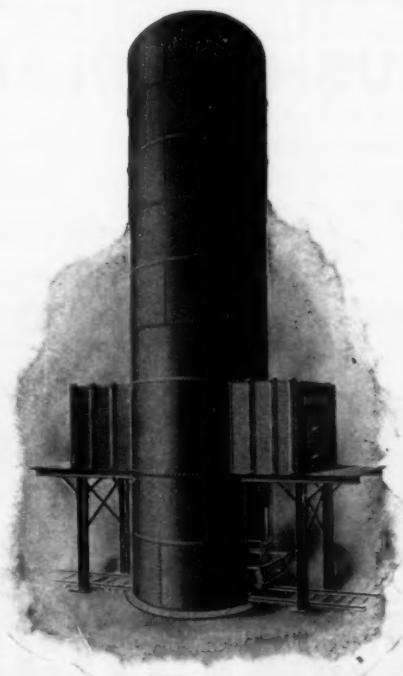
*The* **ROBINSON - GRAVES**

**Sewer Pipe Co.**

UHRICHVILLE, OHIO.

# Keystone Continuous Burning Lime Kiln

**BROOMELL'S PATENT.**



Single kiln as it appears when erected ready for operation except that no arrangement is shown for charging the stone at the top. At the bottom of the kiln will be noticed hand wheels which open and close the shears at the bottom of the kiln. The shears can be opened and closed from the outside, thus avoiding all dust.

In the two previous issues of "Rock Products" cuts were inserted showing battery of kilns and single kiln showing interior construction. We are prepared to furnish the Keystone Lime Kiln for burning lime rock with coal, wood, producer gas or natural gas.

We are prepared to equip kilns with link-belt hoisting apparatus for taking rock to the top of the kilns and we are also prepared to equip kilns with induced draft fan attached, whereby the output can be increased from 50 to 100 per cent.

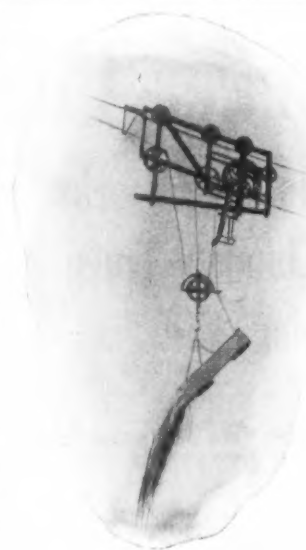
There is no lime kiln in the world that will compare in simplicity, economy and durability with the Keystone.

Manufactured by

**Broomell, Schmidt & Steacy Co.**

YORK, PENNSYLVANIA.

Tell 'em you saw it in ROCK PRODUCTS.



## Owners OF... Quarries

Can do away with  
Tracks, Cars and Men  
to operate them; also  
Save Money, Time,  
Wages and in Con-  
struction by using

## The Hooker Elevator Carrier

FOR INCLINE CABLEWAYS.

MANUFACTURED BY

**HOOKE BROS., Poultney, Vt., U.S.A.**

Who will send description and testimonials to every reader of  
ROCK PRODUCTS upon application.

## THE BLAISDELL AIR COMPRESSORS

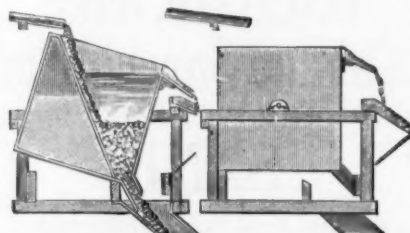


ARE IDEAL FOR QUARRY WORK.  
Self-Oiling Dust Proof  
Substantial

SEND FOR CATALOGUE.

**THE BLAISDELL MACHINERY CO.**  
BRADFORD, PA.

**THE STEBBIN'S**  
Automatic Washing and Settling Box.



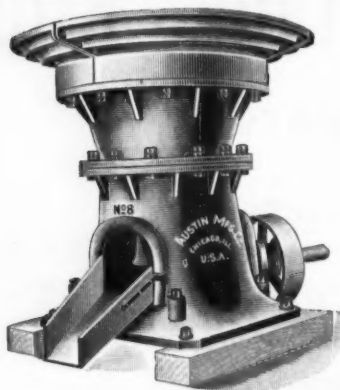
For Washing and Separating Materials from Foreign Matter.

For Particulars Address

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Specially Adapted to Sand, Lime, Stone, Clay, Etc.

CAPACITY AND ECONOMY. NO WEAR AND TEAR.

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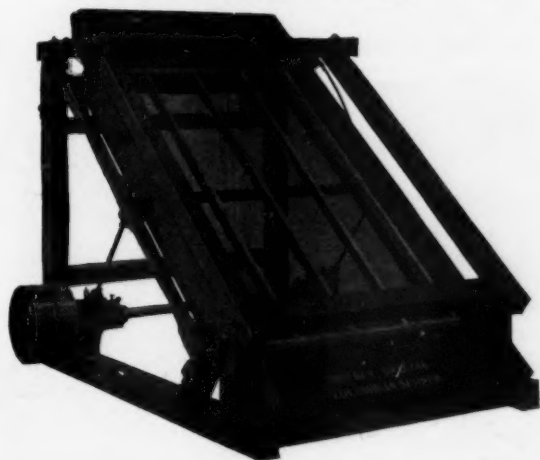
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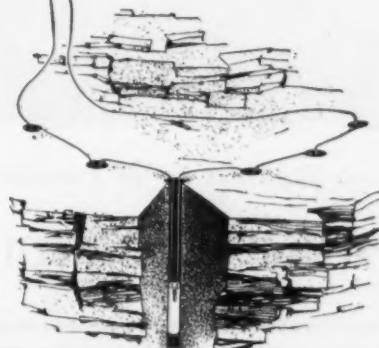


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52 Plants running in Europe and 9 plants running in the United States, others being installed in both countries.



Every part made in our own works and thoroughly tested before leaving our hands.

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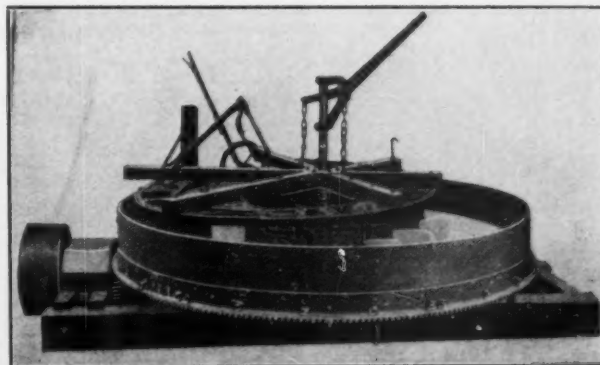
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The only machine that can be used in the process successfully, no other mixer on the market  
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For Mixing Concrete, Cement, Mortar, Plaster and any similar material. The only machine in which material is always in plain sight; that makes a perfect mixture, no matter what class of work is being done.

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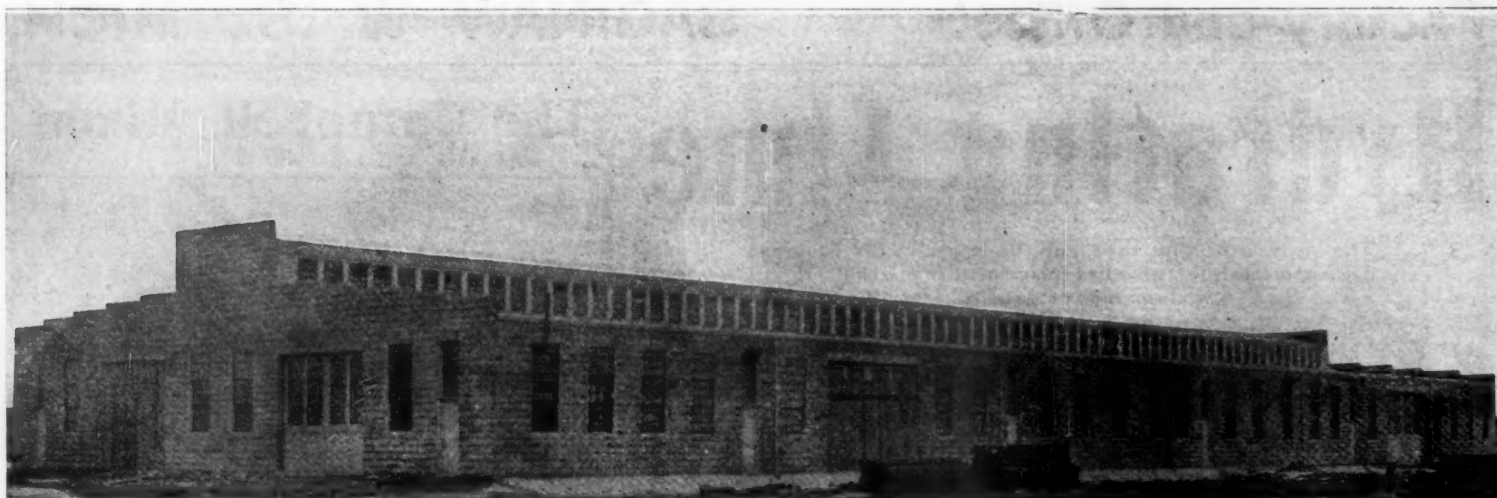
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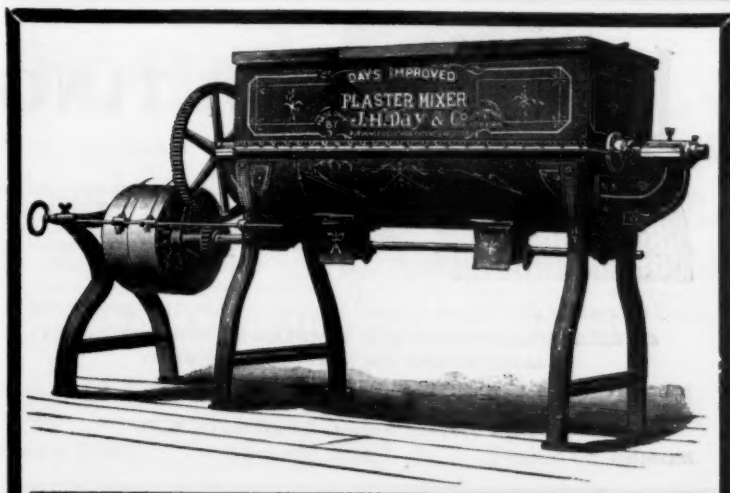
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That's the verdict of every Plaster Maker when he sees the product of DAY'S

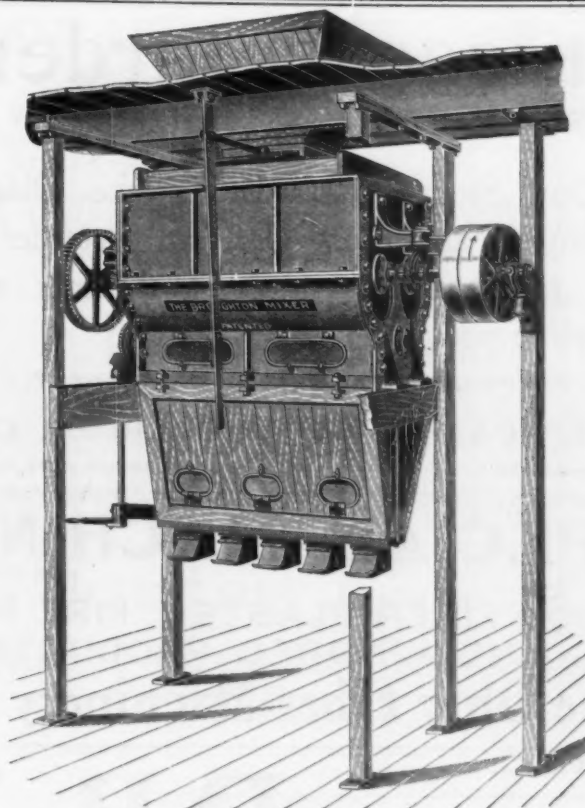
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Because of its Simple Construction, the

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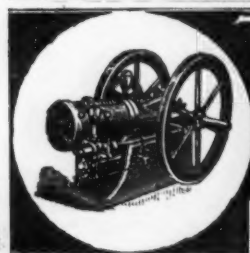
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STANDS SUPREME  
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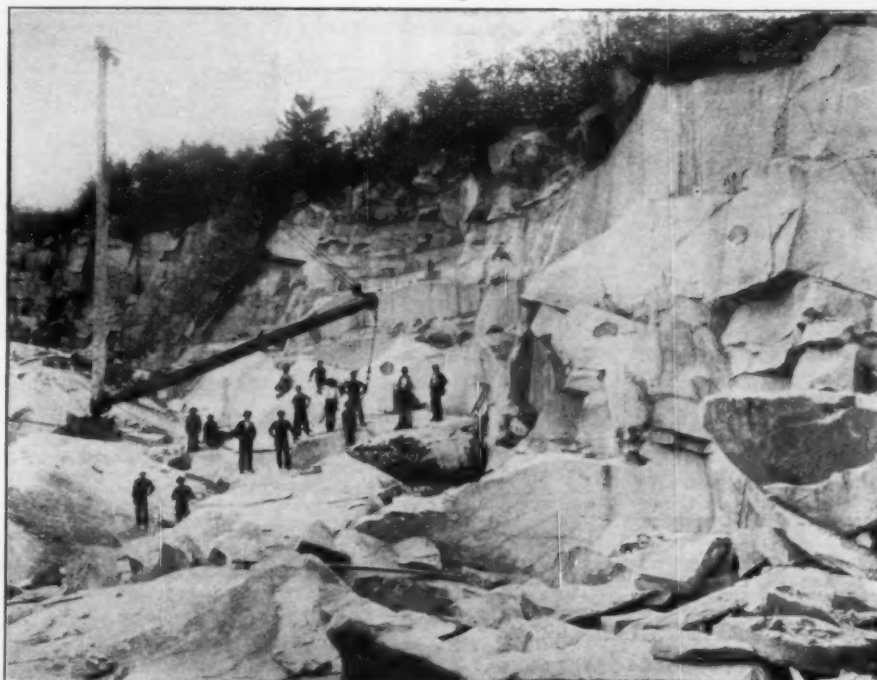
I have been in the com-  
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Lamson & Co. for 21  
years and had the per-  
sonal supervision of  
this quarry during that  
period.



Rough stock furnish-  
ed to the limit of trans-  
portation

Stock squared and  
polished for the trade.

Only five quarries in  
Barre producing dark  
granite and mine is  
second to none.



Among the important  
contracts for which the  
Granite was supplied  
from my quarry, are  
the following:

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Soldiers Monument, at Wells-  
boro, Pa.

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Capitals for Mausoleum,  
erected by John L. Flood,  
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Monument erected to Hon. A.  
B. Martin, at Lynn, Mass.  
One of the finest private  
monuments in New England.

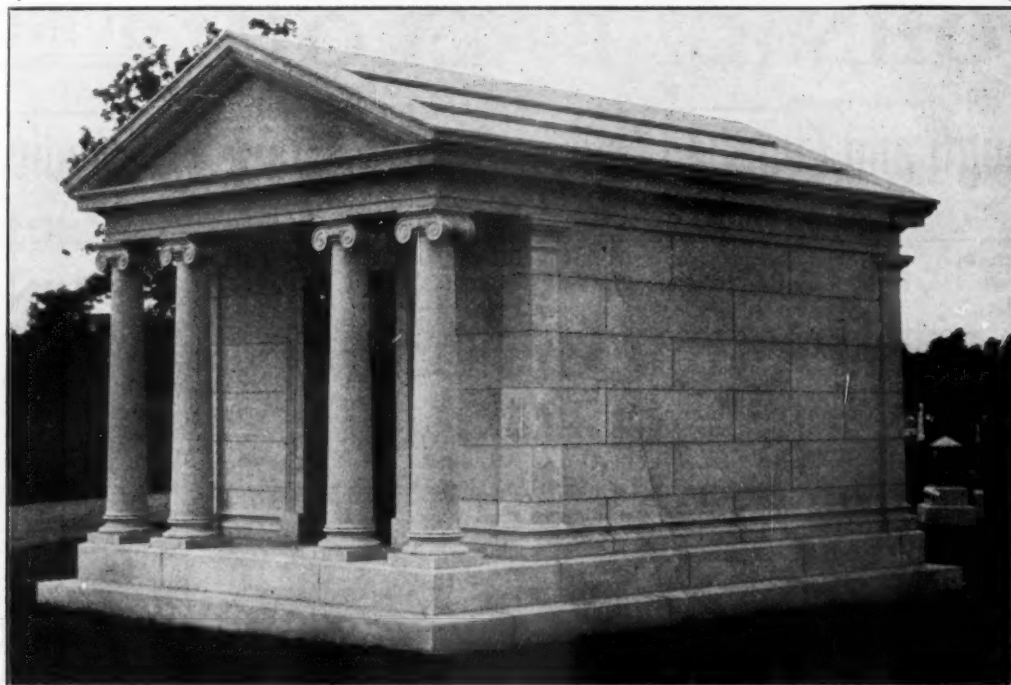
Tell 'em you saw it in ROCK PRODUCTS.

We make a Specialty of  
large work in Barre  
Granite Shafts,  
Mausoleums

Our Plant is Equipped with  
All Modern Machinery

We Operate Our Own  
Quarry, and Supply  
Rough Stock to  
The Trade.

Write us for Estimates on any-  
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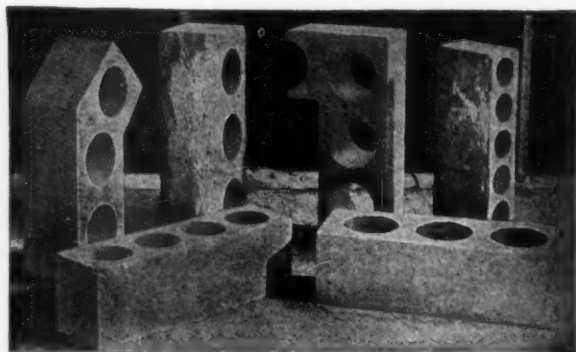
**WELLS, LAMSON & COMPANY, BARRE, VERMONT.**

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## STONE CHEAPER THAN BRICK.

Made under the new method without  
tamping or pressure on our ma-  
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**\$50.00**



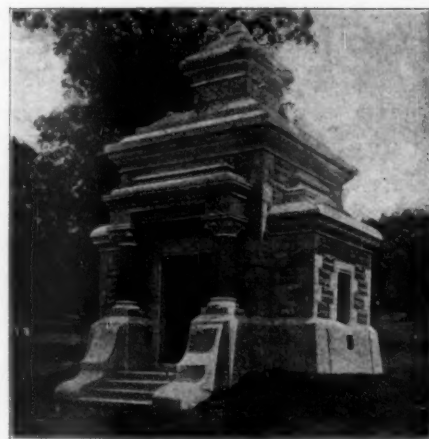
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in one operation 2 ft. 6 in. x 9 in. x 10 in. No  
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**STEVENS CAST STONE CO.,**

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**Granite City Polishing Machine.**

Power Hoist with ball bearing,  
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AND ALL KINDS AND SIZES OF CEMETERY WORK.

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IN THE BLOCK.

Light and dark, clouded and white, can be  
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is a necessity in every well-equipped, up-to-date, granite-cutting plant. It saves time, saves loss by  
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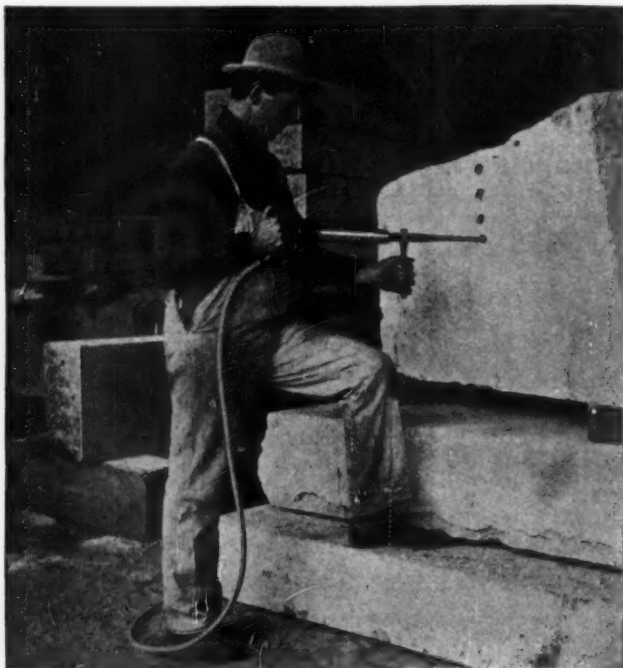
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This Tool will drill  $\frac{3}{4}$ -in. x 3-in. Plug Holes in Granite, in from eighteen to thirty seconds.

Surfacing Machines. Carving Tools. Air Compressors.  
Engines. Complete Pneumatic Plants.

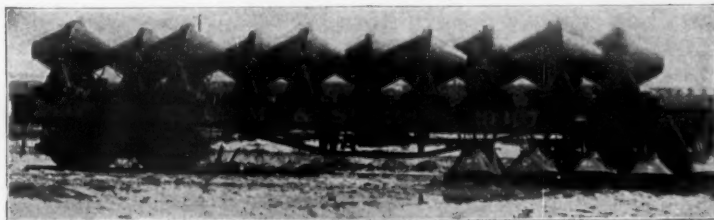
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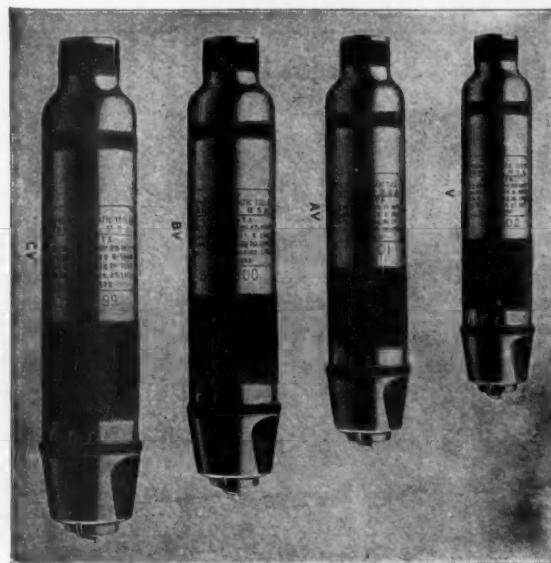
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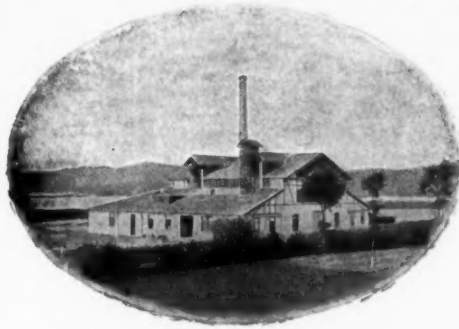
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and  
Lime  
Building  
Brick.**

BETTER BE RIGHT THAN SORRY.

Our factories are erected by our own men, who have for years been engaged in the erection of sand-lime brick plants in Europe, thus assuring every advantage gained by years of experience.

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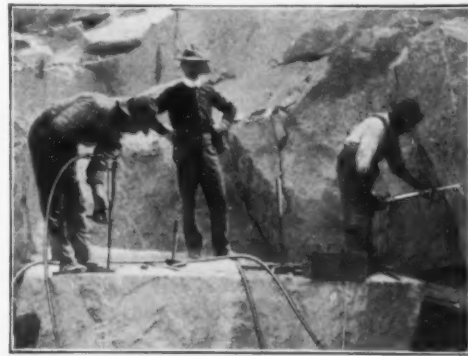
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COMPLETE PNEUMATIC PLANTS.

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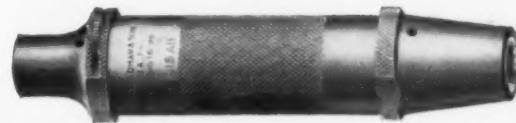
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Manufacturers

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### OUR SPECIALTIES

Stone Planers,	Screw Feed Gangs,
Wardwell Channelers.	Power Hoists,
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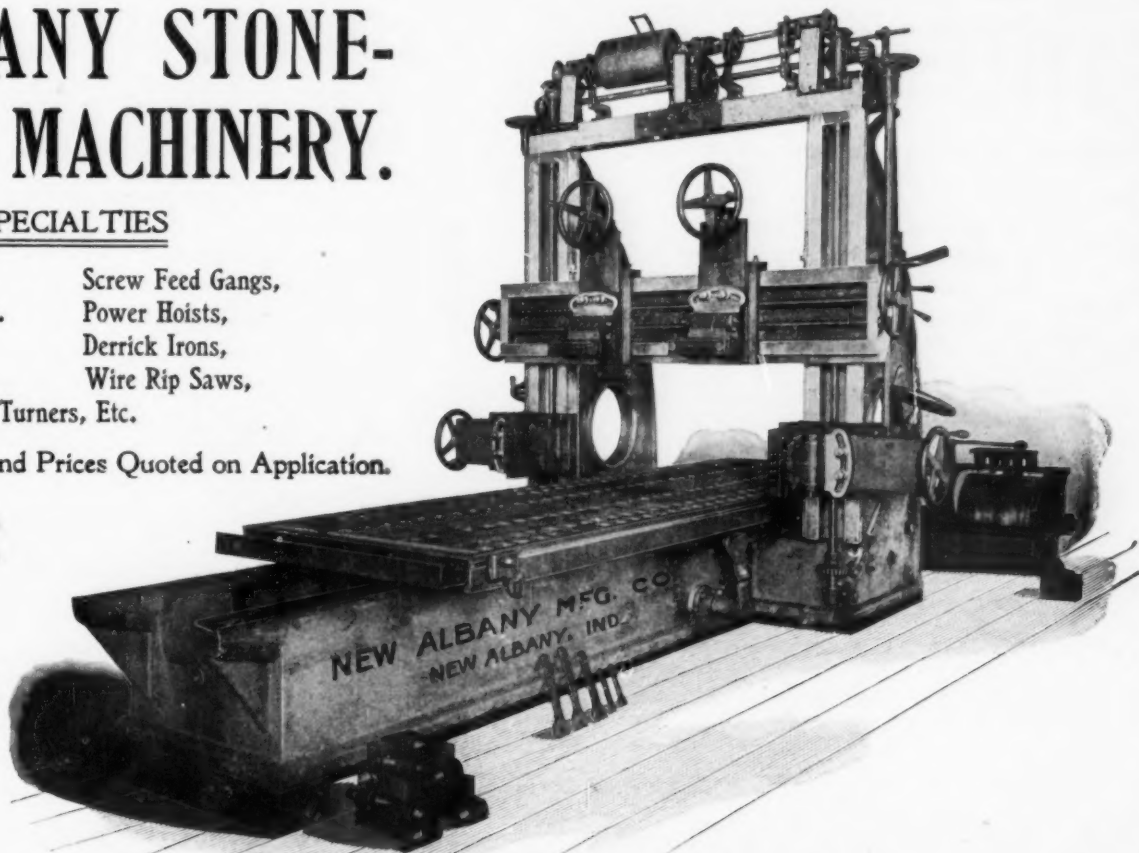
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OUR 12 FT. X 4 FT. SINGLE PLATEN STONE PLANER. We Make Them In Any Size.

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